ANNUAL REPORT

ON

VACCINATION IN THE MADRAS PRESIDENCY

AND ON THE WORK OF THE

VACCINE SECTION OF THE KING INSTITUTE OF PREVENTIVE MEDICINE, MADRAS

FOR THE YEAR

1916-17.

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OFFICE OF THE SANITARY COMMISSIONER,
MADRAS, 31*st July* 1917.

From

MAJOR W. A. JUSTICE, M.B., C.M., D.P.H., I.M.S.,
Sanitary Commissioner for Madras,

To

THE SECRETARY TO GOVERNMENT,
LOCAL AND MUNICIPAL DEPARTMENT.

SIR,

I have the honour to forward herewith the report of the Director, King Institute, Guindy, on the working of the Vaccine Section of the Institute and that of the Deputy Sanitary Commissioner, Madras, on the progress of Vaccination in the Madras Presidency during the official year 1916–17.

VACCINE SECTION OF THE KING INSTITUTE, GUINDY.

2. (i) *General.*—The work of the section was uniformly satisfactory. Credit is due to Dr. Gibson and his Assistants for the continued efficiency and usefulness of the Institute.

(ii) *Vaccine.*—The experiment of storing vaccine lymph in the raw condition and grinding and mixing it with lanoline as required for issue was discontinued. The vaccine was prepared throughout the year on the old method and the bulk of the lymph supplied was lanolinated vaccine. Glycerinated vaccine also was supplied to Madras and to Colombo for seed lymph.

Supplies to local bodies of lanolinated vaccine were made fortnightly as usual. In a few selected towns, however, tri-monthly supplies were ordered as an experimental measure to see whether such frequent supplies would effect any improvement in the local success rates. The result of the experiment is under observation. Its extension to other tracts will depend upon whether reports are favourable or not.

The total average success rate of the year was 86·81 per cent of cases vaccinated against 87·70 per cent in 1915–16. The highest rate (90·03 per cent) was recorded in October and the lowest (82·55 per cent) in June. Judged with reference to districts, Kurnool (96·85 per cent) takes the first place and Gōdāvari (68·34 per cent) the last. The success rate was also bad in several other districts, Coimbatore and Gōdāvari are conspicuous in returning lowest success rates year after year. Chingleput, their companion in previous years, shows some improvement during the year under review. The local bodies of all these three districts are fully aware of the uniform backward condition of vaccination in their jurisdictions. The reports received from them on this feature with reference to paragraph 5 of G.O. No. 1299 L., dated 22nd September 1916, were duly forwarded to Government. Proposals to improve the present conditions in their districts have been framed and revised instructions issued defining clearly the period within which the vaccine despatched from the Institute should be used by the vaccinators. The putting in operation of these remedial measures is now in the hands of the local bodies and the necessity of seeing that the revised regulations are properly enforced should be impressed upon them.

(iii) There was a further fall in the cost of the Vaccine Section of the Institute from Rs. 41,814 in 1915–16 to Rs. 38,962 during the year under review. The principal budget head which showed decreased expenditure was "contingencies." This saving has resulted in a slight reduction (0·08 pies) in the price of each vaccine case manufactured at the Institute.

VACCINATION DEPARTMENT.

3. (i) *Deputy Sanitary Commissioner and his inspections.*—There was only one Deputy Sanitary Commissioner on duty during the year against the sanctioned strength of three. His work was satisfactory as can be judged from the several inspections he has made and the pains he has taken to enquire into several cases of Deputy Inspectors' misconduct for which they have been suitably admonished or punished.

(ii) *Vaccination staffs.*—The discipline of the subordinate staffs of the department was satisfactorily maintained during the year. A grievance, however, exists on account of the delay in giving effect to the new scale of pay, etc. The present class of man employed as vaccinators is quite unsatisfactory and the sooner steps are taken to replace them by a better class on enhanced rates of pay the better. Nearly 70 per cent of our present day vaccinators get pay varying from Rs. 5 to Rs. 12 per mensem and it is not difficult to imagine what type of man will accept this. To continue this rate of pay which would bring in only very inferior men is, in my opinion, false economy and no delay should take place in bringing the new scheme into force.

(iii) *Results of vaccination, etc.*—The total number of cases vaccinated both under "Primary" and "Re-vaccination" showed a decline from 1,801,170 in 1915–16 to 1,699,926 during the year under report, in spite of the greater prevalence of small-pox in the Presidency. Primary vaccination is compulsory in only municipal areas and in a few selected tracts within District Board areas, while re-vaccination is optional throughout the Presidency. The protective value of vaccination would become better appreciated should primary vaccination be made compulsory throughout the Presidency and re-vaccination at least in tracts immediately threatened with small-pox epidemics. The question of conferring on District Board Presidents the power to extend compulsory provisions of vaccination to re-vaccination in areas where small-pox assumes epidemic proportions may be considered in connection with the proposed amendment of the Local Boards Act.

The average success rate, both under primary and re-vaccination, fell from 86·0 per cent of cases vaccinated in 1915–16 to 85·0 per cent in 1916–17. The decrease is mostly attributable to the causes enumerated by the Deputy Sanitary Commissioner in paragraph 5 (iii) of his report. The employment of better qualified vaccinators for actual vaccination work and a close adherence to the regulations issued by this office for the correct method of vaccinating cases are the only remedies to bring about a better state of things. These matters should receive the earnest attention of all local bodies.

I have the honour to be,

Sir,

Your most obedient servant,

W. A. JUSTICE, MAJOR, I.M.S.,

Sanitary Commissioner for Madras.

ANNUAL REPORT ON THE WORK OF THE VACCINE SECTION OF THE KING INSTITUTE OF PREVENTIVE MEDICINE, GUINDY, FOR THE YEAR ENDING 31ST MARCH 1917.

The total amount of vaccine supplied by the Institute during the year under report amounts to 2,024,220 cases. When compared with the supply of the previous year, there is a drop of 89,477 or 4·23 per cent.

2. Table I shows the quantity of vaccine issued to various bodies for the quinquennium 1912–13 to 1916–17.

TABLE I.

Statement showing the quantity of vaccine supplied to various bodies from 1912-13 *to* 1916-17.

To whom supplied.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.
Government officers including jails ...	41,902	47,172	20,951	21,451	{ 22,656 { * 1,700
Agency Tracts	27,130	23,150	25,060	24,105	28,815
Military Department	12,333	27,587	25,671	14,410	19,677
District Boards	1,560,341	1,625,926	1,649,070	1,739,000	1,652,330
Municipalities	173,255	179,330	178,980	236,185	212,035
Superintendent of Vaccination, Secunderabad	...	...	19,530	8,970	7,930
Vaccinator, Bolarum	...	...	1,460	1,550	1,070
Civil Surgeon, Civil Hospital, Basrah ...	...	...	...	2,400	200
Private bodies	72,678	69,000	62,695	65,626	77,807
Total ...	1,887,639	1,972,165	1,983,417	2,113,697	2,024,220

* Supplied to the Port Health Officer, Negapatam.

The most marked feature shown by the table is the great fall in the amount of vaccine supplied to District Boards and Municipalities. This fall amounts to 86,670 cases or 4·98 per cent and 24,150 cases or 10·23 per cent under District Boards and Municipalities, respectively. The fall in the supply to Municipalities was due to the Madras Corporation indenting for much less lymph than during last year, the epidemic of small-pox having been much milder during 1916–17 than during the previous year. Marked falls are also to be noted in the amounts supplied to the Superintendent of Vaccination, Secunderabad, and the Vaccinator, Bolarum, the percentage reductions amounting to about 11·59 and 30·97, respectively. The Civil Surgeon, Basrah, was supplied with 200 cases only and from April 1916 the supplies were stopped at his request. Marked rises, viz., 13·54 per cent and 19·54 per cent, are however seen in the supplies made to Government officers including Jails and Agency Tracts, respectively. Great increases are also seen under the headings of Private Bodies and Military Department. These amount to about 18·56 and 36·55 per cent, respectively.

3. There was no change in the manufacture of the vaccine. As usual, the bulk of the material issued was lanolinated vaccine, but glycerinated vaccine was supplied to Madras City and to Colombo as in previous years.

4. In the great majority of cases, the usual fortnightly despatch was adhered to; but the system of three supplies per month was continued to Chingleput, and parts of Gōdāvari, North and South Arcot. The period of experiment of supplying vaccine thrice a month introduced last year to the Municipalities of Anantapur, Cocanada, Coimbatore, Nellore and Vizagapatam was extended by another year in consideration of the reports and the results furnished by the Chairmen of the above Municipal towns. From the 1st of March 1917 the period allowed to vaccinators to utilize vaccine has been limited to a maximum of five clear days after the receipt of the vaccine by them, thus compelling them to use up their supplies as promptly as possible. The effect of this innovation must be closely watched during the ensuing year.

5. Extra indents from District Boards and Municipalities amounted to 16·64 per cent and 12·41 per cent, respectively, this year. In this respect there is a sudden fall in the case of Madras City which received an extra supply of 1,200 cases only for the whole year, when compared to 37,175 cases received in the previous year.

TABLE II.

Statement showing the expenditure incurred during the year 1916–17 under all heads of expenditure of the Vaccine Section of the King Institute of Preventive Medicine, Guindy.

Detailed heads of account.	Amount. RS. A. P.
Establishment charges—	
Assistant Director ...	2,702 14 5
Clerks and Servants ...	6,943 2 11
Deputy Inspectors ...	4,231 5 4
Famine batta ...	203 6 8
Travelling allowance ...	54 6 10
Total establishment ...	14,135 4 2
Supplies and services—Contingencies—	
Purchase of stores, apparatus ...	6,855 6 11
Cost of calves including transport ...	15,099 0 0
Feeding charges ...	1,209 6 5
Water works ...	542 14 6
Gas works ...	122 12 2
Purchase and repair of furniture ...	180 6 4
Hot and cold weather charges ...	30 0 0
Tour charges ...	18 3 0
Cleaning charges ...	84 5 6
Service postage and telegram charges ...	2,723 1 3
Office expenses ...	893 0 1
Miscellaneous ...	29 10 0
Other contingencies ...	155 2 0
Pay of menials ...	2,980 2 1
Total contingencies ...	30,923 6 3
Proportionate cost of stationery supplied for 1916–17 ...	124 8 5
Cost of clothing supplied for 1916–17 ...	39 10 2
Cost of repairs to Vaccine Section buildings for 1916–17 as per statement furnished by the Executive Engineer, South Presidency Division, with his letter No. 1061-M., dated 5th May 1917.	2,783 4 8
Total cost of stationery, clothing, repairs, etc. ...	2,947 7 3
Grand total, Vaccine Section ...	48,006 1 8

TABLE III.

Statement showing the net expenditure incurred during the year 1916–17 in the King Institute of Preventive Medicine, Guindy, Vaccine Section.

Particulars.	RS. A. P.	Amount. RS. A. P.
Gross expenditure as per Statement II ...		48,006 1 8
Deduct—		
(1) Credits under sale of calves and miscellaneous receipts remitted to Treasury ...	4,181 2 0	
(2) Cost of vaccine lymph supplied to private bodies during the year ...	4,862 15 0	
	9,044 1 0	9,044 1 0
Net total expenditure ...		38,962 0 8

TABLE IV.

Statement showing the number of cases for which vaccine was despatched to different bodies—private bodies being excluded—during the year 1916–17.

To whom supplied.	Number of cases for which vaccine was supplied.	Rate per case.	Total amount debitable. RS. A. P.
1. Government officers including jails *plus* supplies to the Port Health Officer, Negapatam.	22,656 1,700	3·744449 pies.	* 485 10 0
2. Agency Tracts	28,815		† 581 9 4
3. Military Department	19,677		383 12 0
4. District Boards	1,652,330		‡ 33,119 13 10
5. Municipalities	212,035		§ 4,211 12 10
6. Superintendent of Vaccination, Secunderabad [Secunderabad Local (Abkāri, etc.) Fund]	7,930		154 10 5
7. Vaccinator, Bolarum (Bolarum Cantonment Funds)...	1,070		20 13 10
8. Civil Surgeon, Civil Hospital, Basrah ...	200		3 14 5
Total ...	1,946,413		38,962 0 8

N.B.—In calculating the cost per case of vaccine, Rs. 1,002–7–0 has been deducted from Rs. 38,962–0–8 as the former represents registration charges, and it is charged to the bodies concerned.

* Includes Rs.	10	10	0	for registering vaccine packets.	
† ,, ,,	19	10	0	,,	,,
‡ ,, ,,	895	9	0	,,	,,
§ ,, ,,	76	10	0	,,	,,
Total ,,	1,002	7	0		

6. As will be seen from Tables II, III and IV, there has been a decrease of Rs. 3,000 in the working costs and this has resulted in a decrease of ·083168 pies per case. The main saving has been effected in the cost of calves including transport. Purchase of apparatus and stores shows a rise of Rs. 1,050, but this is largely due to the receipt of European stores such as boxes and receptacles for vaccine this year. The home indents for the years 1915 and 1916 which were hitherto delayed on account of war, are now being complied with. The increase of Rs. 732 under 'pay of menials' is due to the pay of drivers and oilers of the refrigerating plant, hitherto met under 'establishment charges,' being now included in 'pay of menials', as per orders of the Accountant-General, Madras, these being non-pensionable menials. In spite of slight increases under individual items of expenditure, it is satisfactory to note that there has been a decrease of over Rs. 3,000 under 'contingencies.'

The amount credited to Government under 'sale of calves' shows a fall of 18·6 per cent, but there is a rise of 18·5 per cent in the receipts from the sale of vaccine to private bodies.

TABLE V.

Returns recorded in the King Institute of Preventive Medicine, Guindy, from the whole of the Madras Presidency according to the months of the year.

Serial number.	Months.	Number successful.	Number unsuccessful.	Percentage of success.
	1916.			
1	April	100,866	13,099	88·51
2	May	93,460	17,802	84·00
3	June	93,647	19,798	82·55
4	July	98,040	15,669	86·22
5	August	94,289	18,327	83·73
6	September	106,276	15,789	87·07
7	October	95,329	10,557	90·03
8	November	102,904	12,442	89·21
9	December	106,213	16,939	86·25
	1917.			
10	January	101,618	12,197	89·28
11	February	96,448	14,567	86·88
12	March	103,197	14,025	88·04
	Total ...	1,192,287	181,211	86·81 % successful.

7. Table V shows the success rate obtained monthwar. There has been a slight fall of 0·89 per cent over the whole year. With the exception of the month of July which shows a rise in the success curve, there is the usual low success rate in the summer and early autumn months. June is the worst month of the year while October is the best. The sudden drops in August, December and February are difficult to account for. The maximum success rate of 90·03 per cent falls short of the 93·74 per cent of the February previous by 3·71 per cent.

TABLE VI.

Returns recorded in the King Institute of Preventive Medicine, Guindy, from the whole of the Madras Presidency, according to districts, 1916–17.

Serial number.	Districts.	Total successful.	Total unsuccessful.	Percentage of success.
1	Anantapur	26,566	2,742	90·64
2	Bellary	31,274	1,604	95·12
3	Chingleput ...	38,925	9,627	80·17
4	Chittoor ...	36,054	3,115	92·05
5	Coimbatore ...	47,715	21,716	68·72
6	Cuddapah	22,813	5,670	80·09
7	Ganjām	60,672	7,055	89·58
8	Gōdāvari	42,367	19,626	68·34
9	Guntūr	59,588	6,213	90·56
10	Kistna	67,009	6,579	91·06
11	Kurnool	30,298	985	96·85
12	Madura	39,708	8,139	82·99
13	Malabar	101,341	21,546	82·47
14	Nellore	29,548	9,119	76·42
15	Nilgiris	5,474	196	96·54
16	North Arcot	53,043	7,212	88·03
17	Ramnad	53,156	1,762	96·79
18	Salem	58,197	4,440	92·[illegible]1
19	South Arcot ...	6.565	9 912	85 09
20	South Kanara	41,327	4,507	90·17
21	Tanjore	69,068	3,659	94·97
22	Tinnevelly	62,921	8,916	87 59
23	Trichinopoly	56,454	6,085	90·27
24	Vizagapatam	102,204	10,786	90·45
	Total ...	1,192,287	181,211	86·81 % successful.

8. Table VI gives the results obtained districtwar. Gōdāvari and Coimbatore continue to be bad and in keeping with the general lower percentage of success in all the districts in general show a drop in the success rate of 2·59 per cent and 2·27 per cent, respectively, from the previous year's figures. Kurnool tops the list, displacing Ramnad by ·06 per cent and the Nilgiris by ·31 per cent. As compared with last year, Nellore takes the place of Chingleput, to form the third worst district by recording a success rate of below 80 per cent. Nellore shows the greatest fall, viz., 7·06 per cent in the success rate; Malabar and Cuddapah show falls of 5·54 per cent and 5·28 per cent, respectively. Chingleput shows a rise of 6·42 per cent, whilst Ganjām and Madura have improved by 1·93 per cent and 2·77 per cent, respectively.

TABLE VII.

Statement showing the percentage of success obtained in certain districts selected for comparison in each of the last five years.

Serial number.	Districts.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.	Average.
1	Bellary	96·48	97·59	96·81	96 58	95·12	96·52
2	Anantapur	95·45	94·41	94·35	92·24	90·64	93·42
3	Kurnool	96·95	96·65	96·82	96·64	96·85	96·78
4	Gōdāvari	79 04	84·64	81·46	70·93	68·34	76·88
5	Coimbatore	69·59	78·92	76·59	70·99	68·72	72·96

9. Table VII shows the percentage rate of success attained in five districts selected for comparison during each of the last five years. It will be noted that these districts keep up their relative position in a remarkable manner. Gōdāvari and Coimbatore are far below and at the bottom of the list.

TABLE VIII.

Statement showing the percentage of success obtained in the different months of the year for five years and the average for each month during that time.

Serial number.	Months.	1912–13.	1913–14.	1914–15.	1915–16.	1916–17.	Average.
1	April	86·72	87·24	95·76	84·26	88·51	88·50
2	May	80·57	86·09	92·85	82·62	84·00	85·23
3	June	82·84	81·61	92·87	81·49	82·55	84·27
4	July	88·42	87·47	93·19	83·27	86·22	87·71
5	August	87·39	90·53	92·65	79·86	83·73	86·83
6	September	84·87	92·10	92·14	81·75	87·07	87·59
7	October	88·02	93·83	90·64	92·18	90·03	90·94
8	November	91·58	96·17	90·33	92·76	89·21	92·01
9	December	91·73	93·79	86·82	93·28	86·25	90·37
10	January	93·00	95·28	87·24	92·82	89·28	91·52
11	February	91·62	96·36	87·91	93·74	86·88	91·30
12	March	88·56	95·72	87·45	92·48	88·04	90·45

10. The seasonal curve is marked by irregularities as compared with previous years. The colder months show no marked predominance over the warmer months as regards the success rate.

TABLE IX.

Statement showing the duration of storage of 'Lanoline' paste during the official year 1916–17.

Serial number.	Name of month.	Duration of storage each month.	
		Minimum period.	Maximum period.
1	April 1916	29 days	75 days.
2	May ,,	46 ,,	165 ,,
3	June ,,	96 ,,	181 ,,
4	July ,,	105 ,,	136 ,,
5	August ,,	5 ,,	154 ,,
6	September ,,	10 ,,	164 ,,
7	October ,,	23 ,,	38 ,,
8	November ,,	3 ,,	48 ,,
9	December ,,	45 ,,	55 ,,
10	January 1917	54 ,,	68 ,,
11	February ,,	25 ,,	70 ,,
12	March ,,	19 ,,	28 ,,

11. Table IX shows the maximum and minimum periods during which lanolinated vaccine was stored before issue for each month this year. As usual the storage period was longer during the hot months when no vaccine was made. The averages of the maximum and minimum periods of storage of lanoline paste during the months April—September in 1915–16 and 1916–17 are 119–69 and 146–49 days, respectively, whilst the corresponding figures for the months of October—March are 58–5 and 51–28 days, respectively. How far the lower percentage of success in the year was due to the larger amount of material issued being of longer storage is a point worth investigating.

TABLE X.

Statement showing the duration of storage of 'Glycerine' paste during the official year 1916–17.

Serial number.	Name of month.	Duration of storage each month.	
		Minimum period.	Maximum period.
1	April 1916	32 days	51 days.
2	May ,,	45 ,,	74 ,,
3	June ,,	75 ,,	103 ,,
4	July ,,	102 ,,	132 ,,
5	August ,,	10 ,,	145 ,,
6	September ,,	15 ,,	30 ,,
7	October ,,	9 ,,	42 ,,
8	November ,,	7 ,,	37 ,,
9	December ,,	22 ,,	60 ,,
10	January 1917	25 ,,	53 ,,
11	February ,,	4 ,,	58 ,,
12	March ,,	1 ,,	18 ,,

12. Table X shows the duration of storage before issue of glycerinated vaccine during each month of the year. The maximum and minimum periods showed a considerable increase this year with the exception of those in March when compared with the statement of the previous year.

TABLE XI.

Statement showing the average yield of pulp per calf according to the months of the year (1916).

Months.	Grammes. Average.	Grammes. Maximum.	Grammes. Minimum.	Average yield of lymph per calf during 1916.
January	6·2	16·7	1·1	5·25 grammes.
February	6·2	13·4	1·5	
March	6·0	16·1	2·0	
April	No operation for lymph.			
May		Do.		
June		Do.		
July		Do.		
August	4·2	11·2	1·0	
September	4·0	10·7	1·0	
October	4·8	10·4	1·0	
November	4·9	9·6	1·0	
December	4·7	10·0	1·2	

13. Table XI shows the maximum, minimum and average yield per calf for each of the months of the year. The average yield per calf fell considera bly compared to that of last year. This was most likely due to the seed lymph being inferior in its power of production of good vaccine material.

TABLE XII.

Statement showing the average yield of lymph per calf according to years.

Year.	Grammes.	Year.	Grammes.
1904	4·9 *	1911	5·3
1905	3·5	1912	5·9
1906	No records.	1913	5·3
1907	3·2	1914	7·9
1908	2·6	1915	6·29
1909	3·7	1916	5·25
1910	5·1		

* The records are incomplete; this figure would be lower.

14. Table XII shows the average yield per calf for the year and when compared to that of the last year, there is a decrease of 1·04 grammes or 16·5 per cent this year.

15. Civil Assistant Surgeon S. Ramakrishnan continued as temporary Assistant to the Director during the year.

16. The vaccination class was held as usual during February and March. Twenty-three students attended and all of them obtained qualifying marks in the examination held at the end of the course.

17. Four medical graduates attended a course in the preparation and preservation of animal vaccine in December last and passed the examination at the end of the course.

18. The staff of the section worked satisfactorily and carried out their duties with regularity and promptness.

THE KING INSTITUTE, GUINDY,
21st *June* 1917.

F. MAITLAND GIBSON, M.B., B.SC.,
Director.

REPORT ON VACCINATION IN THE MADRAS PRESIDENCY FOR THE YEAR 1916-17.

From Dr. K. T. MATTHEW, D.HY., D.P.H. (Cantab.), Deputy Sanitary Commissioner and Inspector of Vaccination, Madras, to the Sanitary Commissioner for Madras, No. 209, dated 30th June 1917.

I have the honour to submit the Annual Report on Vaccination in the Madras Presidency for the year 1916-17.

2. *Staff.*—The three Deputy Sanitary Commissioners for the Presidency sanctioned in G.O. No. 1416, Public, dated 17th December 1913, not having been fully recruited and Major Quirke, I.M.S., Deputy Sanitary Commissioner, Central Range, reverted to Military duty not having returned, I continued to be in charge of all the three ranges in the Presidency throughout the year with the exception of a period of two months and three days from 28th April 1916 when I was on leave on account of ill-health. During my absence the Sanitary Commissioner was in charge of the office.

The following statement shows the subordinate vaccination staffs employed in the Presidency during the past two years :—

	Deputy Inspectors.			First-class vaccinators, Rs. 20—15.	Second-class vaccinators, Rs. 12—10.	Third-class vaccinators, Rs. 7—5.	Total number of vaccinators.
	First grade, Rs. 70.	Second grade, Rs. 60.	Third grade, Rs. 40.				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1915-16	19	25	37	268	466	152	886
1916-17	19	23	40	261	437	151	849

NOTE.—These figures include the staffs employed in Bangalore and Secunderabad Cantonments and exclude those on duty in the King Institute, Guindy. In the Institute there are five Deputy Inspectors of the first grade.

During the year the additional Deputy Inspector of Vaccination sanctioned in G.O. No. 134, Judicial, dated 17th January 1916, for the Ganjām Hill Tracts was entertained.

3. *Inspections by the Deputy Sanitary Commissioner.*—During the year I inspected the municipalities of Chidambaram, Madura, Tiruppattūr, Vāniyambādi, Mannārgudi, Virudupatti, Periyakulam, Negapatam, Tiruvālūr, Adōni, Hospet, Guntūr and Bōdināyakkanūr and vaccination in the municipalities of Chingleput, Vizagapatam, Cocanada and Nellore and in a number of villages and towns of South Arcot, Ramnad, Chingleput, Madura, Cuddapah, Bellary, North Arcot, Vizagapatam and Nellore districts. The number of villages and towns other than municipalities inspected during the year was 237 and the total number of cases of vaccination verified was 4,248. I inspected also the town of Tiruvadamarudūr in Tanjore district in connexion with the Kumbabhishekam festival celebrated there in the month of July 1916.

4. It is becoming more and more evident that the work of Deputy Inspectors of Vaccination requires close scrutiny and supervision by frequent inspections, which it is not possible for an officer with the Presidency charge to exercise. During the year, three Deputy Inspectors of Vaccination have been found to have submitted false diaries without doing any inspection, all of whom were dismissed from service, a fourth man was reduced and two others fined heavily for offences, which it would not have been possible by any other means than by a close inspection of their work to find out.

5. (i) *Vaccination.*—The trial scheme of vaccination continued to be in force in the whole of Chingleput district and in selected areas of North Arcot, South Arcot and Madura districts. The extension of this scheme to other districts having been definitely abandoned in G.O. No. 1814 L., dated 23rd October 1913, proposals

were called for for the reorganization of the vaccination staff of every district in G.O. No. 1686 L., dated 29th September 1914, on the basis of a scheme prepared by the President, District Board and the District Medical and Sanitary Officer of Salem and hence come to be known as the 'Salem scheme,' which is really a modification of the trial scheme or rather a compromise between the old system and the new 'trial scheme.' The essence of the 'Salem scheme' is, as in the 'trial scheme,' a better scale of pay for vaccinators and the taking off from them the duty of verification of results of vaccination which is entirely to be done by the Deputy Inspectors whose number in consequence has to be increased. These proposals have now been received from every district and forwarded to Government whose orders on the subject are awaited. The revised scale of pay proposed and approved for the Deputy Inspectors of Vaccination in G.Os. Nos. 1005 L., dated 13th September 1905 and 1814 L., dated 23rd October 1913, has also yet to be introduced.

(ii) The total vaccination work performed during the last three years by all agencies throughout the Presidency is shown in the following table :—

	1914–15.	1915–16.	1916–17.
Primary vaccination	1,512,515	1,532,185	1,481,337
Re-vaccination	176,407	268,985	218,589
Total ...	1,688,922	1,801,170	1,699,926

As compared with the previous year the number of cases under both primary vaccination and re-vaccination showed a decrease of 50,848 and 50,396 respectively, i.e., a total fall of 101,244. When compared with 1914–15 the year under report showed a decrease of 31,178 cases under primary vaccination and an increase of 42,182 under re-vaccination and on the whole an increase of 11,004 cases. As compared with last year large increases are noticeable in the districts of Chingleput (+ 6,746), South Arcot (+ 6,575) and Koraput (+ 6,452). The districts which show a great decrease in the total number of vaccinations are Malabar (— 31,933), Gōdāvari (— 21,009), Vizagapatam (— 15,825), Madura (— 8,939), Kistna (— 7,944) and Nellore (— 7,522). The decrease in Malabar is attributed to the paucity of cases for vaccination which is a matter for investigation and in the Madura district to temporary vacancies in the staff. In all other districts the main cause is stated to be diminished prevalence of small-pox compared with the previous year when owing to the impetus given by virulent outbreaks large numbers were vaccinated.

(iii) The following table shows the total successful vaccinations by all agencies and the percentage of successful cases including re-vaccinations :—

Establishment.	Number of successful vaccinations.				Total of successful vaccinations.		Ratio per cent of successful cases.				Ratio per cent of total successful cases.	
	1915–16.		1916–17.				1915–16.		1916–17.			
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	1915–16.	1916–17.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	1915–16.	1916–17.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Local Fund vaccinators ...	1,155,851	120,748	1,090,029	97,737	1,276,599	1,187,766	87·3	79·5	86·2	76·7	86·5	85·3
Government do. ...	14,283	1,249	13,900	4,119	15,532	18,019	85·0	69·5	82·0	80·2	83·3	81·6
Municipal do. ...	106,830	51,735	107,326	34,500	158,615	141,826	93·5	70·9	93·0	68·6	84·7	85·6
Cantonment do. ...	4,152	1,988	2,950	1,667	6,140	4,617	85·2	42·5	87·6	40·9	64·3	62·0
Dispensaries ...	96	33	145	30	129	175	98·0	84·6	98·0	100·0	94·2	98·3
Medical subordinates ...	1,464	8,519	213	6,771	9,983	6,984	87·4	70·4	88·0	66·3	75·5	66·8
Total ...	1,282,676	184,322	1,214,563	144,824	1,466,998	1,359,387	87·7	75·7	86·7	73·4	86·0	85·0

The percentage of success both under primary and re-vaccination showed a decrease. The total fall is 1 per cent when compared with 1915–16 during which year itself there had been a fall of as much as 3·6 per cent as compared with 1914–15. A comparison such as this of a combined success rate

of primary and re-vaccinations is open to fallacy as a large increase in the number of re-vaccinations would greatly lower the combined rate, because the success rate in re-vaccination is invariably lower than in primary vaccination. It would therefore be strictly more correct to compare the success rate under primary (including secondary) from year to year. A perusal of the previous annual reports on vaccination in the Presidency shows that the success rate in primary vaccination which was 91·8 in 1913–14 came down to 90·8 in the next year, 87·7 in 1915-16 and 86·7 during the year under report. Special instructions in the form of circulars were issued during 1916–17 to ensure the prompt use of lymph and with the same end in view, as a trial, tri-monthly supply of lymph was made to five Municipalities—Vizagapatam, Cocanada, Nellore, Coimbatore and Anantapur. In spite of it all the success rate has gone down. As in the past year, loud complaints were received from several districts regarding the poor quality of lymph but none of these could stand close scrutiny and most of them were based on some change in the colour of the vaccine paste due entirely to the kind of lanoline now obtained from England but which in no way affects the quality of the lymph. What is however of much more serious consequence in my opinion than the reduced percentage of success is the lowered quality of the results secured in successful cases within the last few years. I have over and over again drawn attention to this increasing defect in my Inspection Notes on Vaccination in the districts and there is little doubt whatever that the persistence of small-pox in many districts is much due to this. The main cause for such continuous fall in success rate appears to be the ignorance and inefficiency of the present class of ill-paid, uneducated and unqualified vaccinators. In every district there is dearth of suitable hands for vaccinators' appointment as no one can be tempted into an employment which carries no living wages while the duties attendent upon it are particularly arduous. The remedy lies in giving effect to the long deferred schemes of improving the pay and prospects of the vaccination staff.

Infantile vaccination.—When compared with the previous year the following districts show a decided increase :—Ganjām (+16·9), Kurnool (+16·5), Kistna (+6·3), South Kanara (+5·3) and the Nilgiris (+5·0). The districts which show a marked decrease in this respect are Nellore (—11·1), South Arcot (—10·5), Cuddapah, (—9·7), Coimbatore (—7·9), Vizagapatam (—7·4) and Malabar (—6·0). The Municipalities which show a marked increase in infantile vaccination are :—Bellary (+68·7), Palni (+48·0), Narsaraopet (+16·5), Anantapur (+14·7), Kurnool (+12·0), Mangalore (+11·2), Hospet (+11·2) and Ellore (+10·9). The Municipalities which show a marked decrease in this respect are :—Erode (—60·7) Trichinopoly (—33·8), Gudiyattam (—33·7), Negapatam (—32·7), Walajapet (—27·3), Cannanore (—26·4), Vizianagram (—25·1), Chidambaram (—25·0), Bimlipatam (—20·4), Calicut (—19·9), Tirupati (—19·3), Berhampur (—16·5), Madras (—15·4), Chingleput (—15·3), Parlākimedi (—15·3), Periyakulam (—14·5), Nellore (—14·2), Palghat (—14·1), Tuticorin (—13·8), Māyavaram (—13·1), Karūr (—12·4), Conjeeveram (—12·0), Mannārgudi (—11·7), Tiruvālūr (—11·5), Tanjore (—11·3) and Adōni (—10·4).

(iv) The cost of the various vaccination staffs and the average cost of each successful case are exhibited in the subjoined statement :—

Establishment.	Total expenditure.		Average cost of each successful case.	
	1915–16.	1916–17.	1915–16.	1916–17.
	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.
Government establishment ...	8,716 13 10	† 10,690 12 6	0 9 0	0 9 6
Local fund do. ...	2,89,605 0 10	2,86,188 5 0	0 3 8	0 3 10
Municipal do. ...	42,913 12 10	42,511 8 2	0 4 4	0 4 10
Cantonments do ...	3,171 0 2	3,408 15 0	0 8 3	0 11 10
Total ...	* 3,44,406 11 8	* 3,42,799 8 8	0 3 9	0 4 1

* Exclusive of the pay and allowances of the Inspector of Vaccination and Deputy Sanitary Commissioner.

† The main cause of the increase is the appointment of a second Deputy Inspector of Vaccination and a peon to the Ganjām Hill Tracts.

When compared with the previous year there is a rise in the charges of Government and cantonment establishments and a fall in those of Local Funds and Municipalities. The average cost of each successful case rose from As. 3–9 in 1915–16 to As. 4–1 in the year under report. It varied from As. 2–6 in the Tinnevelly district to As. 11–2 in the Nilgiris.

The Municipalities which showed a comparatively high cost per case are Kodaikānal (As. 13–1), Erode (As. 12–8), Tirupati (As. 9–8), Madras (As. 9–2) and Peddapur (As. 8–4). The lowest figure was reached by the Tuticorin Municipality where it was As. 2. The rate in Tanjore, Madura, Calicut and Cannanore was As. 2–2, Srīvilliputtūr As. 2–6, Trichinopoly As. 2–7, and Bodinayakanur and Vizianagram As. 2–11.

(v) Vaccination was compulsory in all the Municipalities. The total number of operations performed in the Municipalities during the year is 174,810 against 199,389 in 1915–16, i.e., there is a decrease of 24,579 operations. The Municipalities which show a marked increase in the number of operations over the previous year are:—Madura (+2,574) and Cannanore (+1,508). The towns which show a large decrease in this respect are Madras (—25,459), Parlākimedi (—4,493), Tuticorin (—3,622) and Trichinopoly (—1,437). The decrease in these Municipalities is attributed to the absence or less prevalence of small-pox during the year.

(vi) The following table exhibits the comparative success obtained by the use of different kinds of lymph in primary vaccination :—

Number of cases excluding unknown.	Area.	Kind of lymph.	Whence obtained.	Percentage of success.
1,265,195	Local Fund ...	Lanoline lymph ...	Supplied by the King Institute, Guindy.	86·2
...	Do. ...	Glycerine „ ...	Do.	...
95,726	Municipalities ...	Lanoline „ ...	Do.	92·2
19,714	Do. ...	Glycerine „ ...	Do.	96·8

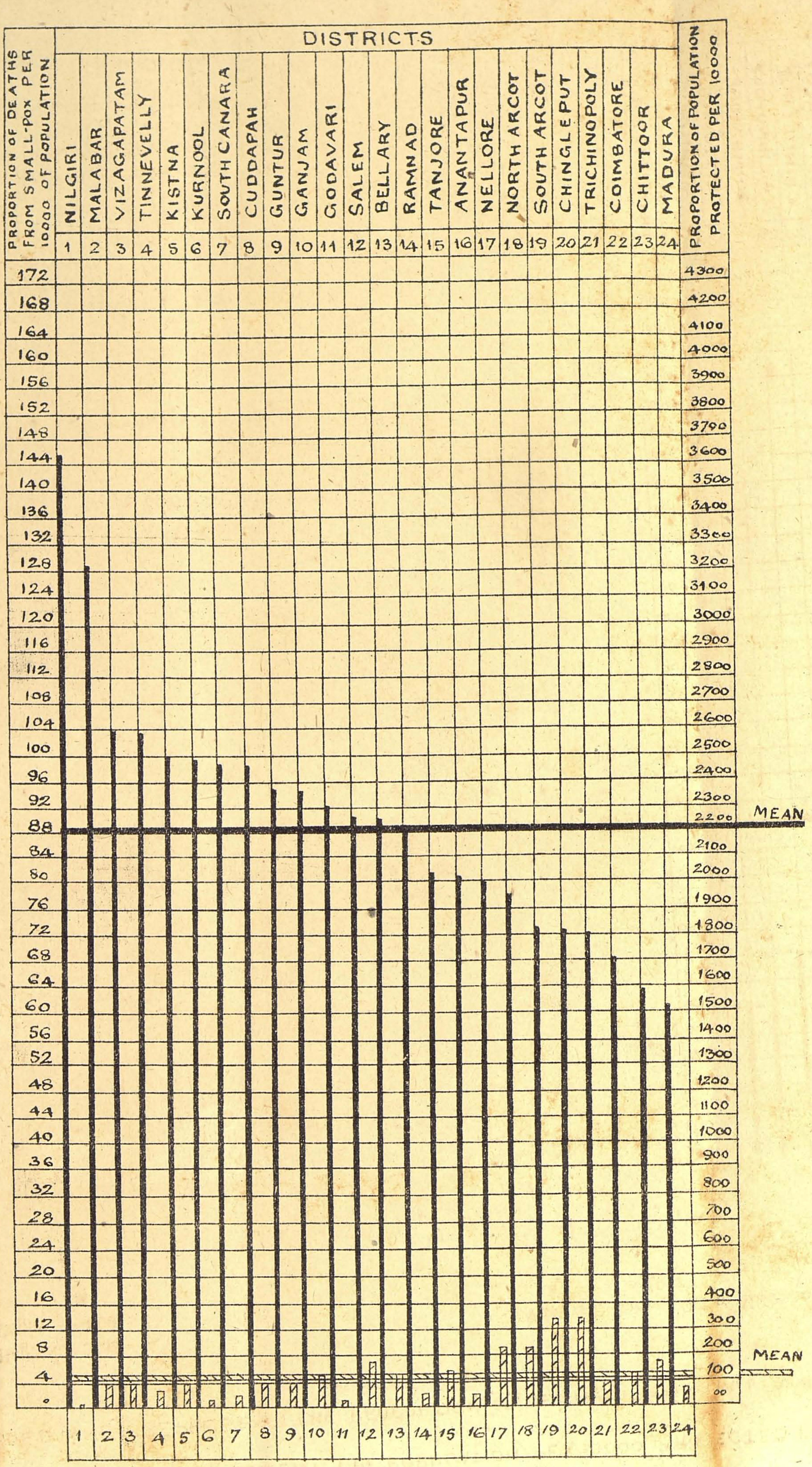
The percentage of success from lanoline lymph was 86·2 in 1916–17 against 87·2 in 1915–16 in Local Fund areas and 92·2 and 92·8, respectively in municipalities. Glycerine lymph also showed a decreased rate of success of 96·8 against 97·4 in the year previous.

(vii) A large number of deaths from small-pox was recorded during the year, the figures being 23,417 against 21,463 in 1915–16 which means that there has been an increase of 1,954 of preventable deaths during the year. Nevertheless there has been a decrease of 101,244 operations during the year when compared with the previous year and this decrease is ascribed mainly to the absence or less prevalence of small-pox ! This shows how insidiously the disease has been prevailing lulling the general public and the local bodies into a false sense of security. In this connexion, I may mention that many reports were received from the Deputy Inspectors of Vaccination that small-pox reports from the Revenue authorities were received with considerable delay or not at all. It is to be hoped that in future the local officials concerned will pay more attention in carrying out the wise provisions contained in the Board's Standing Order No. 102 and help the vaccination staff in carrying out re-vaccination at the very onset of the disease in their jurisdiction.

The proportion of population protected in the districts and municipalities during the year is shown in the annexed two diagrams.

(viii) The Deputy Inspectors of Vaccination, Bellary (49·8), Kanigiri (44·8) and Gudur (40·2) have failed to verify 50 per cent of cases vaccinated within their ranges. Of these the shortage in Bellary range is only (0·2) and the Deputy Inspector has accounted for it satisfactorily. Kanigiri range was without a Deputy Inspector for over two months under unavoidable circumstances. The Deputy Inspector of Vaccination, Gudur range, will be dealt with suitably for his low verification.

(ix) There were two deaths among Deputy Inspectors of Vaccination during the year. Three were dismissed from service for submission of false returns and



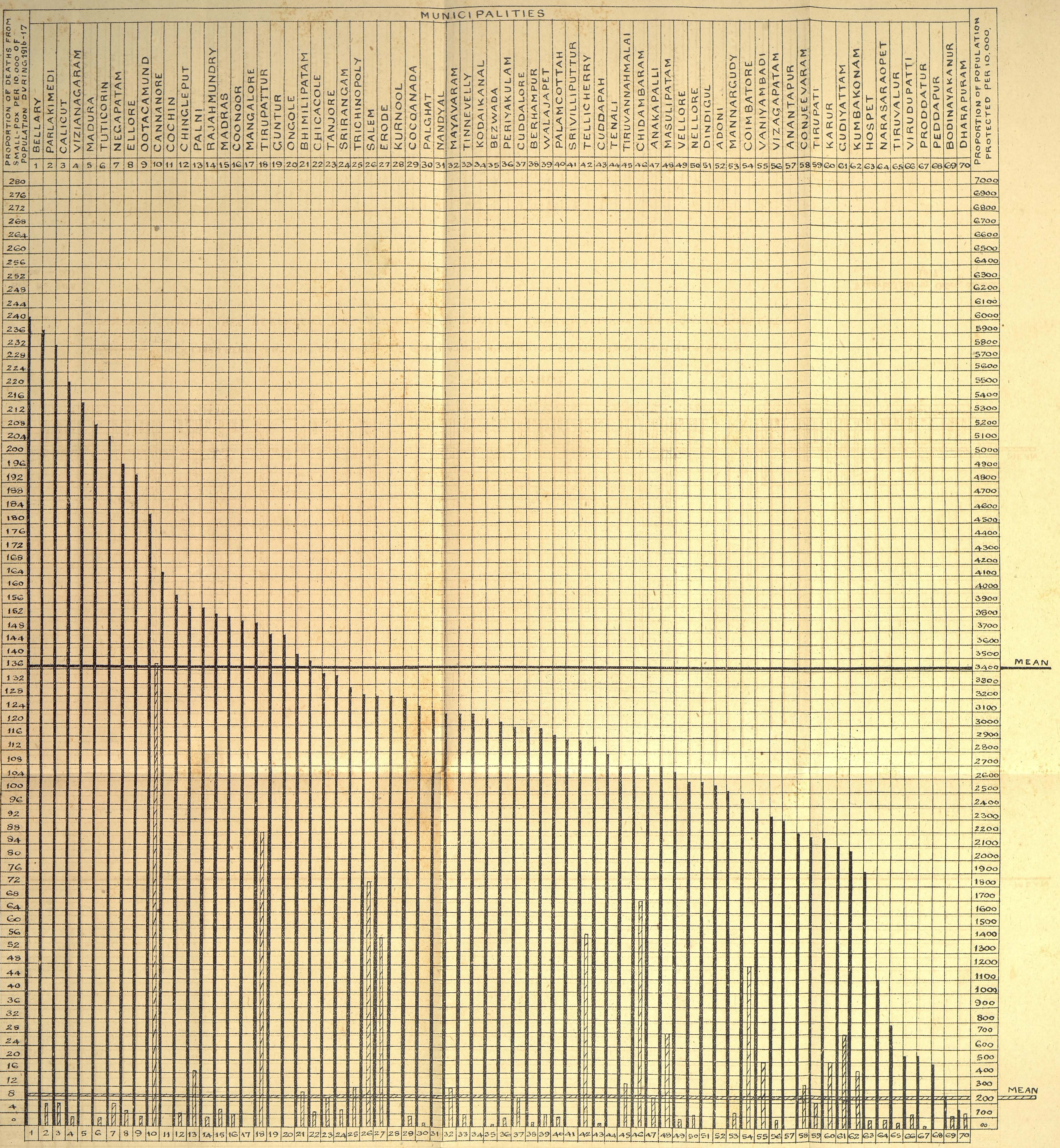
REFERENCE

THICK BLACK LINES REPRESENT THE POPULATION PER 10000 PROTECTED FROM SMALL-POX

SHADED LINES REPRESENT THE PROPORTION OF DEATHS FROM SMALL-POX PER 10000 POPULATION

Reg. No. 2486
Copies — 500

Vandyke, Survey Office, Madras.
1917



REFERENCE

THICK LINES REPRESENT THE PROPORTION OF POPULATION PER 10000 PROTECTED FROM SMALL-POX

SHADED LINES REPRESENT THE PROPORTION OF DEATHS FROM SMALL-POX PER 10000 OF POPULATION

Reg. No. 2485
Copies — 500

Vandyke, Survey Office, Madras.
1917

diaries and one was reduced and two were fined for other irregularities and improper work. Of the 86 Deputy Inspectors of Vaccination borne on the provincial list 80 are qualified or certificated Sanitary Inspectors, the remaining are either exempted men or those specially selected for these posts before the present rules came into force. The service registers of all the Deputy Inspectors of Vaccination have been verified in the Sanitary Commissioner's Office.

6. My office staff have all done their work to my satisfaction and particularly the two range Head Clerks on whom I had to rely much for the proper conduct of office during my long and continuous tours.

7. In spite of timely intimation and repeated reminders the returns from the Chairman, Municipal Council, Chingleput, the Deputy Inspector of Vaccination, Dindigul range, the District Medical and Sanitary Officer, South Arcot, and the District Medical and Sanitary Officer, Chingleput, were received late, the last of them being only on 14th June 1917 against the due date of 1st May 1917. The preparation of this report was in consequence slightly delayed.

I have the honour to be,

Sir,

Your most obedient servant,

K. T. MATTHEW, D.HY., D.P.H. (CANTAB.),

Deputy Sanitary Commissioner and

Inspector of Vaccination, Madras.

D

VACCINATION STATEMENTS

A—VACCINE DEPARTMENT.

Statment No. I showing the particulars of Vaccination in the Madras Presidency for the official year 1916–17.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary vaccination. Total number of operations.	Successful. Under 1 year.
1	2	3	4	5	6	7			8	9	10
		NORTHERN RANGE.									
1	Ganjām.	Berhampur circle ...	2,153,614	257	9	10,349	6,943	17,292	1,921	13,409	6,850
2		Chicacole do. ...			8	8,454	7,430	15,884	1,985	11,163	6,014
3		Aska do. ...			8	7,612	5,579	13,191	1,649	11,272	4,063
4		Parlākimedi do. ...			7	6,433	5,621	12,054	1,722	8,032	3,531
5		Purushottapur do. ...			8	7,347	5,725	13,072	1,634	11,750	4,315
...		Ganjām Hill Tracts (whole) April to August 1916.			13	4,716	4,068	8,784	676	5,913	972
6		Ganjām Hill Tracts, North, September 1916 to March 1917.			8	2,307	2,053	4,360	545	3,531	665
7		Ganjām Hill Tracts, South, September 1916 to March 1917.			7	2,329	1,883	4,212	602	3,035	702
		Total of district ...	*2,153,614	257	55	49,547	39,302	88,849	1,615	68,105	27,112
8	Gōdāvari.	Cocanada circle ...	341,838	249	7	7,038	6,584	13,622	1,946	13,351	3,304
9		Rajahmundry do. ...	574,472		10	12,282	11,204	23,486	2,349	22,477	2,947
10		Polavaram do. ...	130,992		5	2,809	2,450	5,259	1,052	5,500	995
11		Peddapur do. ...	427,120		10	8,752	8,851	17,603	1,760	17,500	4,898
12		Bhadrāchalam do. ...	75,910		6	1,889	1,831	3,720	620	4,211	986
		Total of district ...	1,550,332	249	38	32,770	30,920	63,690	1,676	63,039	13,130
13	Guntūr.	Guntūr circle	1,625,541	283	9·5	10,830	10,389	21,219	2,234	20,939	10,539
14		Narasaraopet circle ...			10	12,857	9,566	22,423	2,242	17,521	6,393
15		Bāpatla do. ...			11	10,630	10,097	20,727	1,884	20,428	7,333
		Total of district ...	1,625,541	283	30·5	34,317	30,052	64,369	2,110	58,888	24,265
16	Kistna.	Ellore circle	1,884,726	319	15	13,138	12,965	26,103	1,740	26,547	8,725
17		Masulipatam circle ...			14	12,295	11,303	23,598	1,686	23,059	8,860
18		Narasapur do. ...			12	10,444	9,847	20,291	1,691	20,649	6,150
		Total of district ...	1,884,726	319	41	35,877	34,115	69,992	1,707	70,255	23,735
19	Nellore.	Kavali circle ...	1,294,906	162	7·5	6,158	5,718	11,876	1,583	12,609	2,383
20		Gudur do. ...			9	8,265	6,962	15,227	1,692	13,731	4,099
21		Kanigiri do. ...			10	8,030	6,612	14,642	1,464	14,112	2,755
		Total of district ...	1,294,906	162	26·5	22,453	19,292	41,745	1,575	40,452	9,237
22	Vizagapatam.	Vizagapatam circle ..	2,454,029	...	14	14,702	15,856	30,558	2,183	23,267	6,355
...		Government vaccinators (Gudem hills) ...			2	707	578	1,285	642	1,278	211
23		Vizianagram circle ...			14·5	17,460	18,471	35,931	2,478	23,845	5,768
24		Pārvatipuram do.			12	15,318	14,265	29,583	2,465	23,070	5,442
...		Government vaccinators, Palkonda Agency.			1	210	184	394	394	394	52
25		Gunupur circle			9	8,447	8,320	16,767	1,863	14,165	1,913
		Total of district ...	*2,454,029	...	52·5	56,844	57,674	114,518	2,181	86,019	19,741

* Includes Hill Tracts.

Number.	Circles.	Primary vaccination. Successful. 1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average annual number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average annual number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Berhampur circle	4,675	11,756	461	4,187	3,369	187	90·8	84·2	...	3·4	4·5	...	...	...	...
2	Chicacole do.	3,540	9,946	457	4,777	3,721	451	92·9	86·0		4·1	9·4	...	...	...	...
3	Aska do.	4,475	9,302	846	2,236	1,700	311	89·2	88·3		7·5	13·9	...	...	...	...
4	Parlākimedi do.	3,103	6,795	373	4,046	3,089	448	88·7	85·9		4·6	11·1	...	...	...	...
5	Purushottapur do.	4,862	9,924	489	1,492	1,258	112	88·1	91·1		4·2	7·5	...	...	...	...
...	Ganjām Hill Tracts (whole) April to August 1916.	2,358	4,570	481	2,970	2,128	150	84·1	75·5		8·1	5·1	...	...	...	...
6	Ganjām Hill Tracts, North, September 1916 to March 1917.	1,769	2,957	276	1,076	856	81	90·8	86·0		7·8	7·5				
7	Ganjām Hill Tracts, South, September 1916 to March 1917.	1,431	2,698	140	1,309	1,079	85	93·2	88·2		4 6	6·5				
	Total of district	26,213	57,948	3,523	22,093	17,200	1,825	89·7	84·9	34·9	5·2	8·3	73,279	34·0	501	0·2
8	Cocanada circle	5,292	9,033	989	1,843	732	482	73·1	53·8	...	7·4	26·2	...	...	...	...
9	Rajahmundry do.	9,431	13,540	2,443	2,428	1,001	535	67·6	52·9		10·9	22·0	...	...	...	...
10	Polavaram do.	1,988	3,348	428	287	79	63	66·0	35·3		7·8	21·9	...	...	...	...
11	Peddapur do.	4,988	10,049	1,578	3,602	1,733	322	63·1	52·8		9·0	8·9	...	...	...	...
12	Bhadrāchalam do.	1,098	2,184	441	116	54	23	57·9	58·1		10·5	19·8	...	...	...	...
	Total of district	22,797	38,154	5,879	8,276	3,599	1,425	66·7	52·5	26·9	9·3	17·2	55,016	35·5	1,056	0·7
13	Guntūr circle	7,783	18,628	618	843	713	48	91·7	89·7	...	2·9	5·7	...	...	...	...
14	Narasaraopet circle	8,237	15,485	264	5,777	4,976	115	89·7	87·9		1·5	2·0				
15	Bāpatla do.	9,375	17,693	543	991	826	49	88·9	87·7		2·7	4·9				
	Total of district	25,395	51,806	1,425	7,611	6,515	212	90·2	88·6	35·9	2·4	2·8	56,678	34·9	961	0·6
16	Ellore circle	12,889	23,914	365	1,201	789	34	91·3	67·6	...	1·4	2·8	...	...	...	...
17	Masulipatam circle	10,511	20,638	481	1,374	1,297	17	91·4	95·6		2·1	1·2				
18	Narasapur do.	10,788	17,971	520	884	606	39	89·3	71·7		2·5	4·4				
	Total of district	34,188	62,523	1,366	3,459	2,692	90	90·8	79·9	34·6	1·9	2·6	69,246	36·7	1,217	0·6
19	Kavali circle	5,434	8,180	871	418	179	69	69·7	51·3		6·9	16·5	...	...	...	...
20	Gudur do.	6,133	10,877	710	2,687	1,909	298	83·5	79·9		5·2	11·1				
21	Kanigiri do.	6,124	9,579	950	2,294	1,198	367	72·8	62·2		6·7	16·0				
	Total of district	17,691	28,636	2,531	5,399	3,286	734	75·5	70·4	24·7	6·3	13·6	39,195	30·3	938	0·7
22	Vizagapatam circle	11,376	20,279	1,175	9,530	8,212	526	91·8	91·2	...	5·1	5·5	...	...	...	...
...	Government vaccinators (Gudem hills)	498	1,118	68	8	2	4	92·4	50·0		5·3	50·0				
23	Vizianagram circle	11,533	18,962	2,209	13,571	10,850	1,081	87·6	86·9		9·3	7·9				
24	Pārvatipuram do.	11,759	20,172	1,211	7,379	5,178	677	92·3	77·3		5·3	9·2				
...	Government vaccinators, Palkonda Agency.	189	373	1	...	...	...	94·9			0·3	...				
25	Gunupur circle	7,143	12,852	390	2,709	1,802	285	93·3	74·3		2·8	10·5				
	Total of district	42,498	73,756	5,054	33,197	26,044	2,573	91·1	85·0	40·7	5·9	7·8	92,561	37·7	470	0·2

A—VACCINE DEPARTMENT—*cont.*

Statement No. I showing the particulars of Vaccination in the Madras Presidency for the official year 1916-17—cont.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary vaccination. Total number of operations.	Primary vaccination. Successful. Under 1 year.
1	2	3	4	5	6	7			8	9	10
		NORTHERN RANGE—*cont.*									
26	Kora-put.	Jeypore Circle ...	395,537	71	10	10,465	9,944	20,409	2,041	18,057	2,834
27	Kora-put.	Koraput do. ...	229,353	77	8	6,563	6,294	12,857	1,607	10,928	1,602
		Total of district ...	624,890	74	18	17,028	16,238	33,266	1,848	28,985	4,436
		Total of circles in the Northern range ...	11,588,038	...	261·5	248,836	227,593	476,429	1,822	415,743	121,656
		Total of Medical Subordinates.	...	...	...	3,194	292	3,486	...	7	5
1	Municipalities.	Anakāpalle	20,625	1,719	1	542	449	991	991	748	430
2		Berhampore	31,456	5,244	1	740	518	1,258	1,258	824	661
3		Bezwada	32,867	5,976	1	772	620	1,392	1,392	1,240	987
4		Bimlipatam	9,314	179	1	480	357	837	837	290	197
5		Chicacole	17,852	5,617	1	376	398	774	774	525	414
6		Cocanada	54,110	9,018	2	2,355	1,387	3,742	1,871	2,674	899
7		Ellore	37,819	12,606	2	1,871	1,204	3,075	1,537	2,533	1,585
8		Guntūr	42,625	9,134	2	2,005	1,067	3,072	1,536	1,546	1,280
9		Masulipatam	42,123	2,113	3	1,492	1,008	2,500	833	1,478	945
10		Narasaraopet	8,743	4,371	1	487	157	644	644	516	200
11		Nellore	33,246	2,078	2	1,147	592	1,739	869	920	619
12		Ongole	13,286	3,321	1	478	272	750	750	577	346
13		Parlākimedi	18,370	13,812	1	789	452	1,241	1,241	524	378
14		Peddapur	15,436	1,029	1	293	171	464	464	437	274
15		Rajahmundry	48,417	14,583	2	2,223	736	2,959	1,480	1,631	1,023
16		Tenali	18,195	6,998	1	379	382	761	761	823	553
17		Vizagapatam	43,413	8,349	2	1,072	1,280	2,352	1,176	1,207	698
18		Vizianagaram	37,550	7,510	2	2,420	1,923	4,343	2,171	2,183	1,203
		Total of Municipalities in the Northern Range.	525,447	...	27	19,921	12,973	32,894	1,218	20,676	12,692
		Grand Total of Northern range.	12,113,485	...	288·5	271,951	240,858	512,809	1,765	436,426	134,353
		CENTRAL RANGE.									
1	Ananta-pur.	Anantapur Circle ...	444,221	135	8	6,921	6,532	13,453	1,681	12,872	6,573
2	Ananta-pur.	Penukonda do. ...	510,545	119	10	8,465	8,085	16,550	1,655	16,808	8,884
		Total of district ...	954,766	142	18	15,386	14,617	30,003	1,667	29,680	15,457
3	Bel-lary.	Bellary Circle	885,164	156	10	7,394	7,080	14,474	1,447	15,260	9,857
4	Bel-lary.	Hospet do.			10	7,094	6,622	13,716	1,372	13,877	10,386
		Total of district ...	* 885,164	156	20	14,488	13,702	2,8190	1,409	2,9137	20,243
5	Chingle-put.	Chingleput Circle ...	1,340,518	436	4	9,118	9,110	18,228	4,557	17,097	7,222
6	Chingle-put.	Saidapet do. ...			4	9,624	8,933	18,557	4,639	16,555	6,389
7	Chingle-put.	Ponneri do. ...			4	9,544	9,440	18,984	4,746	19,056	6,163
		Total of district ...	1,340,518	436	12	28,286	27,483	55,769	4,647	52,708	19,774
8	Chittoor.	Chittoor Circle ...	528,016	194	10	9,358	8,253	17,611	1,761	17,545	6,713
9	Chittoor.	Karvetnagar do. ...	694,025	234	14	12,046	11,435	23,481	1,677	22,243	9,813
		Total of district ...	1,222,041	215	24	21,404	19,688	41,092	1,712	39,788	16,526
10	Cuddapah.	Cuddapah Circle ...	303,660	137	8	4,903	4,601	9,504	1,188	9,846	3,373
11	Cuddapah.	Proddatur do. ...	267,072	198	7	3,748	3,383	7,131	1,018	7,745	3,171
12	Cuddapah.	Sidhout do. ...	305,459	131	8	5,463	4,714	10,177	1,272	11,102	3,736
		Total of district ...	876,191	148	23	14,114	12,698	26,812	3,352	28,693	10,280

* Excludes Sandur (13,526).

Circles.	Primary vaccination. Successful. 1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average annual number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average annual number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Jeypore Circle	8,481	14,786	1,194	3,509	1,587	378	87·7	50·7	...	6·6	10·8	...	...	...	...
Koraput do.	6,239	9,696	484	1,940	1,378	175	92·8	78·1	...	4·4	9·0				
Total of district	14,720	24,482	1,678	5,449	2,965	553	89·7	60·6	43·9	5·8	10·1	24,369	39·0	...	...
Total of circles in the Northern range	183,502	337,305	21,456	85,484	62,301	7,412	85·5	79·8	34·5	5·2	8·7	410,344	35·4	5,144	0·4
Total of Medical Subordinates.	1	6	...	3,479	2,670	120	85·7	79·5	...	...	3·4	...	...	...	...
Anakāpalle	213	699	5	261	190	...	94·1	72·8	43·1	0·7	...	782	37·9	16	0·8
Berhampore	80	741	...	511	379	63	89·9	84·6	35·6	...	12·3	1,418	45·1	27	0·9
Bezwada	184	1,205	12	164	117	1	98·1	71·8	40·2	0·9	0·6	1,526	46·4	9	0·3
Bimlipatam	19	219	...	600	314	11	75·5	53·3	57·2	...	1·8	472	50·7	1	0·1
Chicacole	61	489	...	249	225	...	93·1	90·4	40·0	...	...	888	49·7	3	0·2
Cocanada	497	1,661	287	1,401	571	363	69·6	55·0	41·2	10·7	25·9	2,294	42·4	59	1·1
Ellore	772	2,404	10	542	322	57	95·3	66·4	72·1	0·4	10·5	2,804	74·1	47	1·2
Guntūr	118	1,406	...	1,615	1,043	219	90·9	74·7	57·5	...	13·6	2,276	53·4	87	2·0
Masulipatam	345	1,404	...	1,037	946	1	95·0	91·0	55·8	...	0·1	1,543	36·6	46	1·1
Narasaraopet	120	340	68	287	198	43	75·9	81·1	61·5	13·2	15·0	433	49·5	1	0·1
Nellore	93	719	1	962	530	49	78·2	58·0	37·6	0·1	5·1	1,264	38·0	12	0·4
Ongole	126	472	11	224	193	1	83·4	86·5	50·1	1·9	0·4	758	57·1	1	0·1
Parlākimedi	38	443	...	740	392	84	84·5	59·8	45·5	...	11·4	1,804	98·2	34	1·9
Peddapur	47	326	2	75	43	...	74·9	57·3	23·9	0·5	...	374	24·2	7	0·5
Rajahmundry	371	1,400	...	1,328	750	176	85·8	65·1	44·4	...	13·3	2,678	55·3	101	2·1
Tenali	181	745	...	2	2	...	90·5	100·0	41·1	...	...	729	40·1	4	0·2
Vizagapatam	258	997	2	1,266	602	172	82·7	55·0	36·8	0·2	13·6	1,456	33·5	11	0·3
Vizianagaram	336	1,741	49	2,319	1,584	172	81·6	73·8	88·5	2·2	7·4	3,069	81·7	1	0·03
Total of Municipalities in the Northern Range.	3,859	17,411	447	13,583	8,401	1,412	86·1	69·0	49·1	2·2	10·4	25,923	49·3	468	0·9
Grand Total of Northern range.	187,362	354,722	21,903	102,546	73,372	8,944	85·6	78·4	35·3	5·0	8·7	436,266	36·0	5,612	0·5
Anantapur Circle	4,697	11,368	80	818	492	29	88·9	62·4	...	0·1	3·5	...	...	...	...
Penukonda do.	5,967	15,239	182	345	269	17	91·7	82·0	...	1·1	4·9				
Total of district	10,664	26,607	262	1,163	761	46	90·4	68·1	28·7	0·9	3·9	28,418	29·8	616	0·6
Bellary Circle	3,719	14,010	117	69	63	...	92·5	91·3	....	0·8	...	...	...	...	...
Hospet do.	2,818	13,562	49	338	327	3	98·1	97·6		0·4	0·9				
Total of district	6,537	27,572	166	407	390	3	95·2	96·5	31·6	0·6	0·7	28,831	32·6	1,080	1·1
Chingleput Circle	5,181	12,693	1,670	2,047	1,294	204	82·3	70·2	...	9·8	9·9	...	...	...	...
Saidapet do.	2,757	10,913	2,890	2,002	866	638	79·9	63·5		17·5	31·9				
Ponneri do.	6,954	13,223	1,938	494	175	106	77·2	45·1		10·2	21·5				
Total of district	14,892	36,829	6,498	4,543	2,335	948	79·7	65·0	29·2	10·4	20·9	34,327	25·6	549	0·4
Chittoor Circle	7,496	14,906	535	1,221	574	216	87·6	57·1	...	3·0	17·7	...	...	...	...
Karvetnagar do.	9,935	20,465	811	1,963	1,373	189	95·5	77·4	...	3·6	9·6				
Total of district	17,431	35,371	1,346	3,184	1,947	405	92·0	70·1	30·5	3·4	12·4	31,318	25·6	873	0·7
Cuddapah Circle	3,187	6,728	377	120	77	1	71·0	64·7	...	3·8	0·8	...	...	...	...
Proddatur do.	2,873	6,368	203	246	162	13	84·4	69·5	...	2·6	5·3				
Sidhout do.	4,432	8,743	533	414	332	31	82·8	86·7	...	4·8	7·5				
Total of district	10,492	21,839	1,113	780	571	45	79·2	77·7	25·6	3·9	5·8	30,704	35·0	557	0·7

A—VACCINE DEPARTMENT—*cont.*

*Statement No. I showing the Particulars of Vaccination in the Madras Presidency for the official year 1916–17—*cont.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary: Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
		CENTRAL RANGE—*cont.*									
13	Kurnool.	Cumbum circle	395,841	118	13	8,743	6,255	14,998	1,154	13,732	5,989
14	Kurnool.	Kurnool do.	497,088	119	12	9,391	7,014	16,405	1,450	15,940	9,428
		Total of district ...	* 892,929	118	25	18,134	13,269	31,403	1,256	29,672	15,417
15	North Arcot.	Vellore circle	1,825,742	371	3	6,763	6,954	13,717	4,572	13,255	7,239
16	North Arcot.	Rānipēttai circle ...			3	6,859	6,617	13,476	4,492	13,947	5,607
17	North Arcot.	Polūr do. ...			3	6,768	6,421	13,189	4,396	14,566	5,543
18	North Arcot.	Tiruppattūr do. ...			10	9,163	8,706	17,869	1,787	18,211	6,294
		Total of district ...	1,825,742	371	19	29,553	28,698	58,251	3,066	59,979	24,683
19	Salem.	Salem circle	50,031	262	7	8,924	8,690	17,614	2,516	18,166	8,305
20	Salem.	Sankari do.	605,833	392	10	9,336	9,147	18,483	1,866	19,131	7,692
21	Salem.	Hosūr do.	601,383	213	9	8,555	8,209	16,764	1,852	16,806	9,021
		Total of district ...	1,707,527	256	26	26,815	26,046	52,861	2,033	54,103	25,018
22	South Arcot.	Cuddalore circle ...	494,072	737	4	8,711	8,907	17,618	4,405	14,172	8,409
23	South Arcot.	Vriddhāchalam circle ...	481,882	393	7	9,429	8,378	17,807	2,544	18,357	5,428
24	South Arcot.	Tirukkōyilūr do. ...	405,559	501	6	7,043	6,694	13,737	2,289	15,323	4,697
25	South Arcot.	Tindivanam do. ..	395,246	485	5	7,457	6,331	13,788	2,758	13,774	4,356
26	South Arcot.	Villupuram do. ...	507,906	755	4	7,635	8,208	15,843	3,961	14,980	7,421
		Total of district ...	2,284,665	545	26	40,275	38,518	78,793	3,031	76,606	30,311
		Total of circles in the Central Range.	11,989,543	...	193	208,455	194,719	403,174	2,089	400,366	177,709
		Total of Medical Subordinates.	...	...	...	1,568	15	1,583	...	24	3
1	Municipalities.	Adōni	31,645	2,281	2	761	637	1,398	699	1,373	1,211
2	Municipalities.	Anantapur	8,457	940	1	247	160	407	407	351	214
3	Municipalities.	Bellary	34,956	6,991	3	2,391	1,042	3,433	1,144	2,586	2,274
4	Municipalities.	Chidambaram	21,327	10,663	1	1,148	446	1,594	1,594	863	465
5	Municipalities.	Chingleput	11,626	9,301	1	601	298	899	899	550	412
6	Municipalities.	Conjeeveram	53,864	13,466	2	1,238	912	2,150	1,075	1,634	1,349
7	Municipalities.	Cuddalore	56,574	4,254	2	1,447	1,242	2,689	1,314	2,426	1,907
8	Municipalities.	Cuddapah	17,807	903	1	533	298	831	831	594	429
9	Municipalities.	Gudiyāttam	23,390	19,655	1	265	251	516	516	535	457
10	Municipalities.	Hospet	17,671	5,644	1	493	404	897	897	841	672
11	Municipalities.	Kurnool	26,040	5,208	1	736	602	1,338	1,338	1,231	941
12	Municipalities.	Madras	518,660	19,209	† 10	23,457	14,965	38,422	3,842	20,565	16,161
13	Municipalities.	Nandyal	16,230	3,246	1	487	417	904	904	843	564
14	Municipalities.	Proddatūr	15,756	3,939	1	369	267	636	636	601	454
15	Municipalities.	Salem	59,153	13,984	2	1,655	1,270	2,925	1,462	2,452	2,057
16	Municipalities.	Tiruppattur	10,470	4,188	1	464	351	815	815	681	639
17	Municipalities.	Tirupati	16,701	5,000	1	236	191	427	427	406	338
18	Municipalities.	Tiruvannāmalai ...	21,244	1,931	1	532	436	968	968	889	700
19	Municipalities.	Vāniyambādi	20,406	5,850	1	429	354	783	783	767	532
20	Municipalities.	Vellore	49,746	8,102	2	1,490	1,074	2,564	1,282	2,063	1,557
21	Municipalities.	Walajapet	9,962	9,962	1	251	174	425	425	334	256
		Total of Municipalities.	1,050,482	...	37	39,230	25,791	65,021	1,757	42,585	33,589
1	Military Cantonments.	Bangalore	100,834	7,447	2	483	91	574	287	232	158
2	Military Cantonments.	Secunderabad ...	103,879	5,467	4	3,071	3,828	6,899	1,724	3,178	2,018
	Military Cantonments.	Total of Cantonments ...	204,713	6,291	6	3,554	3,919	7,473	2,011	3,410	2,176
		Grand Total of Central Range.	13,040,025	...	236	252,807	224,444	477,251	2,015	446,385	213,477

* Excludes Banganapalli (39,344).

† Medical Vaccinators.

Circles (row label)	Primary vaccination: Successful. 1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average annual number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average annual number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Cumbum circle	6,214	13,091	141	2,484	2,267	76	96·3	94·1	...	1·0	3·0	...	...		...
Kurnool do.	5,985	15,474	57	1,591	1,489	14	97·4	94·4		0·4	0·9				
Total of district	12,199	28,565	198	4,075	3,756	90	96·9	94·3	36·2	0·7	2·2	32,327	36·2	839	0·9
Vellore circle	3,388	10,709	1,267	1,680	964	178	89·3	64·2	...	9·6	10·6	...	...	...	...
Rānipēttai circle	4,540	10,223	1,295	762	223	155	80·8	36·7		9·3	20·3				
Polūr do.	5,008	10,642	2,009	70	40	18	84·7	76·9		13·8	25·7				
Tiruppattūr do.	9,065	15,879	1,112	188	75	53	92·9	85·6		6·1	28·2				
Total of district	22,001	47,453	5,683	2,700	1,302	404	87·4	56·7	26·7	9·5	15·0	50,826	27·8	1,066	0·6
Salem circle	7,172	15,988	696	322	254	32	91·5	87·6	...	3·8	9·9	...	...	...	...
Sankari do.	8,806	16,821	430	494	338	30	89·9	72·8		2·2	6·1				
Hosūr do.	6,337	15,533	200	742	635	29	93·5	89·1		1·2	3·9				
Total of district	22,315	48,342	1,326	1,558	1,227	91	91·0	83·6	29·0	2·5	5·8	58,167	34·1	646	0·4
Cuddalore circle	1,526	10,048	2,373	4,244	3,171	441	85·2	83·4	...	16·7	10·4	...	...	...	...
Vriddhāchalam circle	7,176	13,074	1,998	778	335	204	79·9	58·4		10·9	26·2				
Tirukkōyilūr do.	6,463	11,921	1,481	476	325	91	86·1	84·4		9·7	19·0				
Tindivanam do.	5,533	10,410	1,381	801	383	250	83·9	69·5		10·0	31·2				
Villupuram do.	2,183	9,853	2,686	1,796	866	513	80·1	67·5		17·9	28·6				
Total of district	22,881	55,306	9,919	8,095	5,080	1,499	82·9	77·0	26·4	12·9	18·5	59,823	26·2	1,330	0·6
Total of circles in the Central Range.	139,412	327,884	26,511	26,505	17,369	3,531	87·7	75·6	28·8	6·6	13·6	354,740	29·6	7,577	0·6
Total of Medical Subordinates.	21	24	...	1,559	491	14	100·0	31·8	...	...	0·9	...	...	...	...
Adōni	48	1,259	111	25	25	...	98·9	100·0	40·6	8·1	...	1,112	35·1	91	2·9
Anantapur	53	286	14	56	35	10	84·9	76·1	38·0	4·0	17·9	270	31·9	6	0·7
Bellary	110	2,385	...	870	761	..	92·2	87·5	90·0	...	...	2,911	83·3	76	2·2
Chidambaram	203	779	30	881	711	86	93·5	89·4	69·8	3·5	9·8	730	34·2	1	...
Chingleput	78	510	3	349	216	39	93·2	69·7	62·4	0·5	11·2	658	56·6	2	0·2
Conjeeveram	128	1,483	46	516	344	47	93·4	73·3	33·9	2·8	9·1	1,740	32·3	9	0·2
Cuddalore	413	2,382	13	263	206	12	98·7	82·1	45·8	0·5	4·6	2,370	41·9	12	0·2
Cuddapah	74	505	2	249	63	31	85·3	28·9	31·9	0·3	12·4	744	41·8	7	0·3
Gudiyāttam	57	516	6	...	...	...	97·5	...	22·1	1·1	...	714	30·5	16	0·7
Hospet	138	819	...	61	59	...	97·4	96·7	49·7	...	...	497	28·1	5	0·3
Kurnool	202	1,161	19	152	67	57	95·8	70·5	47·2	1·5	37·5	1,191	45·7	12	0·5
Madras	2,811	19,082	851	17,906	7,849	3,904	96·8	56·1	51·9	4·1	21·8	28,556	55·1	159	0·3
Nandyal	213	779	...	117	106	4	92·4	93·8	54·5	...	3·4	721	44·4	34	2·1
Proddatūr	91	549	...	39	26	...	91·3	66·7	36·5	...	...	146	9·3	...	...
Salem	296	2,354	...	473	363	...	96·0	76·7	45·9	...	...	2,953	49·9	10	0·2
Tiruppattur	22	676	...	134	125	...	99·3	93·3	76·5	...	...	505	48·2	11	0·6
Tirupati	21	362	1	21	8	11	89·3	80·3	22·2	0·2	53·3	540	32·3	15	0·9
Tiruvannāmalai	86	807	...	121	90	5	90·8	77·6	42·2	...	4·1	824	38·8	23	1·1
Vāniyambādi	169	713	32	33	26	3	97·0	86·7	36·2	4·2	9·1	637	31·2	9	0·4
Vellore	453	2,025	3	501	144	350	98·3	95·4	43·6	0·1	69·9	1,616	32·5	35	0·7
Walajapet	41	310	5	94	62	4	94·2	68·9	37·3	1·6	5·6	429	43·1	4	0·4
Total of Municipalities.	5,707	39,742	1,136	22,861	11,286	4,563	95·9	61·7	48·6	2·7	20·0	49,947	47·5	531	0·6
Bangalore	28	187	...	342	183	88	80·6	56·4	...	...	25·7	...	...	...	...
Secunderabad	389	2,763	42	3,913	1,484	89	88·1	38·8	...	1·3	2·3	...	...	..	...
Total of Cantonments	417	2,950	42	4,255	1,667	177	87·6	40·9	22·6	1·2	4·2	7,840	38·3	64	0·3
Grand Total of Central Range.	145,557	370,600	27,689	55,180	30,813	8,285	88·5	65·7	30·8	6·2	15·0	412,526	31·6	8,172	0·6

A—VACCINE DEPARTMENT—*cont.*

*Statement No. 1 showing the Particulars of Vaccination in the Madras Presidency for the official year 1916–17—*cont.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of persons vaccinated by each vaccinator.	Primary vaccination. Total number of operations.	Under 1 year.
1	2	3	4	5	6	7			8	9	10
		SOUTHERN RANGE.									
1	Coimbatore.	North Coimbatore circle.	489,392	165	10	10,178	9,354	19,532	1,953	18,131	4,995
2		East do. do.	554,719	383	9	11,723	11,042	22,765	2,529	22,308	5,971
3		South do. do.	367,884	211	6	6,004	5,644	11,648	1,941	11,261	3,843
4		Central do. do.	640,861	414	9	9,908	9,644	19,552	2,172	19,655	6,218
		Total of district ...	2,052,856	266	34	37,813	35,684	73,497	2,162	71,355	21,027
5	Madura.	Dindigul circle ...	1,738,818	354	4	8,235	7,821	16,056	4,014	16,883	8,284
6		Madura do. ...			4	9,014	8,080	17,094	4,274	16,367	5,947
7		Usilampatti do. ...			4	9,186	8,778	17,964	4,491	18,332	7,873
		Total of district ...	1,738,818	354	12	26,435	24,679	51,114	4,259	51,582	22,104
8	Malabar.	Tellicherry circle ...	2,809,117	485	10	15,074	12,750	27,824	2,782	23,034	9,443
9		Calicut do. ...			9	14,597	13,998	28,595	3,177	24,980	6,584
10		Palghat do. ...			12	20,613	20,315	40,928	3,411	40,659	17,320
11		Malappuram do. ...			10	17,407	16,995	34,402	3,440	33,906	13,470
		Total of district ...	* 2,809,117	485	41	67,691	64.058	131,749	3,212	122,579	46,817
12	The Nilgiris.	Nilgiris circle	89,856	89	3	2,716	1,972	4,688	1,563	4,346	1,731
		Total of district ...	89,856	89	3	2,716	1,972	4,688	1,563	4,346	1,731
13	Ramnad.	Srivilliputtūr circle ...	1,629,387	337	9	9,338	8,652	17,990	1,999	17,944	9,127
14		Ramnad circle			10	9,387	8,782	18,169	1,817	17,857	7,195
15		Tiruppattūr circle ...			11	9,798	9,009	18,807	1,709	18,643	7,318
		Total of district ...	1,629,387	337	30	28,523	26,443	54,966	1,832	54,444	23,640
16	South Kanara.	Northern circle ...	1,142,860	285	10	8,872	8,481	17,353	1,735	16,188	6,151
17		Central do. ...			8	6,781	6,480	13,261	1,657	13,685	6,597
18		Southern do. ...			8	8,361	7,809	16,170	2,021	15,351	5,513
		Total of district ...	† 1,142,860	285	26	24,014	22,770	46,784	1,799	45,224	18,261
19	Tanjore.	Tanjore circle ...	410,870	417	6	5,896	5,298	11,194	1,866	10,902	3,663
20		Negapatam do. ...	536,502	791	9	8,300	7,567	15,867	1,763	15,963	5,281
21		Pattukkōttai do. ...	563,520	407	10	10,483	9,975	20,458	2,046	19,034	4,851
22		Kumbakōnam do. ...	618,122	973	11	10,038	9,324	19,362	1,760	17,374	4,784
		Total of district ...	2,129,014	578	36	34,717	32,164	66,881	1,858	63,273	18,579
23	Tinnevelly.	Shermadevi circle ...	1,660,720	381	8	11,124	10,020	21,144	2,643	22,168	11,268
24		Srīvaikuntam do. ...			9	14,670	12,425	27,095	3,011	26,191	10,777
25		Koilpatti do. ...			8	11,155	9,902	21,057	2,632	21,824	9,054
		Total of district ...	1,660,720	381	25	36,949	32,347	69,296	2,772	70,183	31,099
26	Trichinopoly.	Trichinopoly circle ...	1,941,044	393	12	12,044	11,798	23,842	1,987	24,080	9,295
27		Ariyalūr do. ...			8	8,193	7,961	16,154	2,019	16,759	5,956
28		Nāmakkal do. ...			9	10,144	10,084	20,228	2,248	20,299	7,311
		Total of district ...	‡ 1,941,044	393	29	30,381	29,843	60,224	2,077	61,138	22,562
		Total of circles in the Southern range.	15,193,672	...	236	289,239	269,960	559,199	2,369	544,124	205,820
		Total of Medical Subordinates.	...	...	...	5,653	171	5,824	...	219	50

* Excludes Laccadives (10,600). † Excludes Amindivi Islands (3,955). ‡ Excludes Pudukottah (411,886).

Number.	Circles.	Primary vaccination—Successful. 1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average annual number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average annual number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
		11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	North Coimbatore circle.	5,373	10,592	1,146	2,250	782	224	62·4	38·6	..	6·3	9·9	...	...	...	...
2	East do. do.	7,308	13,570	1,728	1,547	605	194	65·9	44·7		7·7	12·5				
3	South do. do.	4,407	8,510	595	842	420	128	79·8	58·8		5·3	15·2				
4	Central do. do.	6,284	12,803	1,413	296	177	24	70·2	65·1		7·2	8·1				
	Total of district	23,372	45,475	4,882	4,935	1,984	570	68·4	45·5	23·1	6·8	13·1	50,679	24·7	1,708	0·8
5	Dindigul circle	2,750	11,146	2,202	617	210	84	75·9	39·4	...	13·0	13·6	...	...	...	...
6	Madura do.	4,291	10,546	2,872	1,243	393	282	78·1	40·9		17·5	22·7				
7	Usilampatti do.	3,482	11,682	4,532	214	54	115	84·7	54·4		24·7	53·7				
	Total of district	10,523	33,374	9,606	2,074	657	481	79·5	41·2	19·6	18·6	23·2	40,002	23·0	862	0·5
8	Tellicherry circle	7,574	20,022	416	4,790	3,246	99	88·5	67·1	...	1·8	2·1	...	...	...	...
9	Calicut do.	9,361	19,571	897	3,784	1,637	183	81·3	45·5		3·6	4·8				
10	Palghat do.	9,590	28,573	3,083	1,464	818	75	76·0	58·9		7·6	5·1				
11	Malappuram do.	10,660	27,226	1,391	1,083	802	48	83·7	77·5		4·1	4·4				
	Total of district	37,185	95,392	5,787	11,121	6,503	405	81·7	60·7	37·9	4·7	3·6	135,450	47·9	678	0·2
12	Nilgiris circle	2,085	4,219	13	405	391	4	97·4	95·1	...	0·3	0·9	...	...	...	...
	Total of district	2,085	4,219	13	405	391	4	97·4	95·1	51·3	0·3	0·9	4,591	55·1	17	0·2
13	Srivilliputtūr circle	6,325	16,316	546	358	301	23	93·8	89·9	...	3·1	6·4	...	...	...	...
14	Ramnad circle	9,326	17,265	220	312	203	79	97·9	87·1		1·2	25·3				
15	Tiruppattūr circle	9,133	18,166	261	258	218	28	98·8	94·3		1·4	10·7				
	Total of district	24,784	51,747	1,027	928	722	130	96·9	90·5	32·2	1·9	14·0	52,551	32·3	766	0·5
16	Northern circle	6,333	13,792	407	1,364	1,011	80	87·4	78·7	...	2·5	5·9	...	...	...	...
17	Central do.	4,679	11,667	352	499	418	34	87·5	89·9		2·6	6·8				
18	Southern do.	6,927	13,420	696	1,593	1,126	83	91·6	74·6		4·5	5·2				
	Total of district	17,939	38,879	1,455	3,456	2,555	197	88·8	78·4	36·3	3·2	5·7	39,478	34·5	429	0·3
19	Tanjore circle	6,090	10,397	97	406	384	7	96·2	96·2	..	0·9	1·7	...	...	...	...
20	Negapatam do.	8,334	15,302	288	1,351	1,240	74	97·6	97·1		1·8	5·5				
21	Pattukkōttai do.	10,749	17,902	180	1,738	1,626	20	94·9	94·6		0·9	1·2				
22	Kumbakōnam do.	9,693	15,652	548	2,531	2,124	197	93·0	91·0		3·2	7·8				
	Total of district	34,866	59,253	1,113	6,026	5,374	298	95·3	93·8	30·4	1·8	4·9	60,994	28·6	1,232	0·6
23	Shermadevi circle	6,237	18,403	1,334	1,070	723	158	88·3	79·3	...	6·0	14·8	...	...	...	..
24	Srīvaikuntam do.	8,927	21,517	1,122	2,875	2,161	291	85·8	83·6		4·3	10·1				
25	Koilpatti do.	8,487	18,423	860	801	599	136	87·9	90·1		3·9	16·9				
	Total of district	23,651	58,343	3,316	4,746	3,483	585	87·3	83 7	37·2	4·7	12·3	60,054	36·2	301	0·1
26	Trichinopoly circle	11,396	21,588	895	198	176	10	93·1	93·6	...	3·7	5·1	...	...	...	...
27	Ariyalūr do.	7,557	13,824	906	185	138	14	87·2	80·7		5·4	7·6				
28	Nāmakkal do.	8,222	16,646	1,116	262	203	42	86·2	92·3		5·5	16·0				
	Total of district	27,175	52,058	2,917	645	517	66	89·4	89·3	29·7	4·8	10·2	53,158	27·4	838	0·3
	Total of circles in the Southern range.	201,580	438,740	30,116	34,336	22,186	2,736	85·4	70·2	30·3	5·5	8·0	496,958	32·7	6,831	0·4
	Total of Medical Subordinates.	98	183	8	5,605	3,610	294	86·7	68·0	...	3·7	5·2	...	...	...	...

A—VACCINE DEPARTMENT—*cont.*

Statement No. 1 showing the Particulars of Vaccination in the Madras Presidency for the official year 1916–17—cont.

Number.	Districts.	Circles.	Population of districts or circles according to the census of 1911.	Average population per square mile.	Average number of vaccinators employed throughout the year.	Total number of persons vaccinated. Males.	Females.	Total.	Average number of cases vaccinated by each vaccinator.	Primary vaccination. Total number of operations.	Successful. Under 1 year.	1 and under 6 years.	Total of all ages.	Unknown.	Re-vaccination. Total number of operations.	Successful.	Unknown.	Percentage of successful cases in which the results were known. Primary vaccinations.	Re-vaccination.	Persons successfully vaccinated per 1,000 of population.	Percentage of unknown cases to total cases. Primary vaccination.	Re-vaccination.	Average annual number of persons successfully vaccinated during previous 5 years. Number.	Ratio per 1,000.	Average annual number of deaths from small-pox during previous 5 years. Number.	Ratio per 1,000.
1	2	3	4	5	6	7			8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
		SOUTHERN RANGE —*cont.*																								
1	Municipalities.	Bodinayakanur ...	20,205	20,205	1	287	266	553	553	551	266	240	508	...	2	1	1	92·9	100·0	25·2	...	50·0	...	...	...	...
2		Calicut	78,417	7,292	4	4,240	2,610	6,850	1,712	4,022	2,384	904	3,858	...	2,845	2,550	14	95·9	90·1	81·7	...	0·5	6,564	83·7	60	0·8
3		Cannanore	28,957	5,791	1	1,878	1,285	3,163	3,163	1,226	711	414	1,149	6	2,217	1,347	85	94·2	63·2	86·2	0·5	3·8	1,585	54·7	89	3·1
4		Cochin	20,023	20,023	1	1,118	557	1,675	1,675	1,261	649	285	1,157	16	475	167	80	92·1	42·3	66·1	1·3	16·8	1,177	58·8	15	0·7
5		Coimbatore	47,007	11,060	3	1,311	949	2,260	753	1,959	1,136	354	1,574	101	412	131	98	84·7	41·7	36·3	5·2	23·8	1,664	35·4	151	3·2
6		Coonoor	9,933	1,710	1	362	239	601	601	563	354	156	525	6	38	36	...	94·3	94·7	56·5	1·0	...	575	57·9	1	0·1
7		Dindigul	25,052	9,635	1	615	483	1,098	1,098	980	846	56	905	18	147	110	14	94·1	82·7	40·5	1·8	9·5	1,080	43·1	12	0·5
8		Dharapuram	20,000	8,000	1	196	184	380	380	407	183	123	306	28	1	...	...	80·7	...	15·3	6·8	...	...	...	...	...
9		Erode	16,701	16,701	1	470	250	720	720	529	242	100	385	101	191	64	66	89·9	51·2	26·8	19·1	34·6	842	50·4	7	0·4
10		Karur	17,674	8,837	1	303	280	583	583	565	430	47	496	3	35	15	2	88·3	45·5	28·9	0·5	5·7	566	32·0	3	0·1
11		Kodaikānal	2,906	528	1	80	82	162	162	148	106	22	145	...	14	14	...	97·9	100·0	54·7	...	...	123	42·3	...	...
12		Kumbakōnam	64,647	14,628	3	1,306	1,092	2,398	799	2,140	1,523	360	1,907	7	263	192	7	89·4	75·3	32·6	0·3	2·7	1,886	29·2	30	0·5
13		Madura	134,130	5,036	10	9,660	5,826	15,486	1,549	11,364	6,906	3,899	10,922	6	4,402	3,202	113	96·2	74·7	105·3	0·1	2·6	9,898	73·8	336	2·5
14		Mannargudi	21,398	3,566	1	455	346	801	801	788	577	144	761	1	15	12	...	96·7	80·0	36·1	0·1	...	778	36·4	16	0·8
15		Mangalore	48,412	9,680	2	1,609	1,191	2,800	1,400	2,514	1,515	745	2,423	3	286	232	1	96·5	81·4	54·8	0·1	0·4	2,514	51·9	3	0·1
16		Mayavaram	27,121	9,040	1	754	456	1,210	1,210	1,009	767	89	866	1	238	129	14	85·9	57·6	36·6	0·1	6·1	1,198	44·2	8	0·3
17		Negapatam	60,168	11,638	3	2,589	1,674	4,263	1,421	3,748	2,025	1,335	3,427	4	515	342	63	91·5	75·7	62·6	0·1	12·2	4,335	72·0	40	0·7
18		Ootacamund	18,829	1,448	2	894	718	1,612	806	723	546	77	668	12	900	645	38	92·4	71·8	69·7	1·7	4·2	1,306	69·4	2	0·1
19		Palamcottah	44,909	11,227	2	1,635	773	2,408	1,204	1,486	1,113	203	1,325	9	1,059	710	147	89·7	77·9	45·3	0·6	13·9	1,796	40·0	10	0·2
20		Palghat	44,319	4,185	2	1,259	1,030	2,289	1,144	1,997	1,236	281	1,543	...	467	253	...	77·3	54·2	40·5	...	...	2,030	45·8	13	0·3
21		Periyakulam	18,715	18,715	1	427	387	814	814	732	669	42	716	...	82	79	...	97·8	96·3	42·5	...	...	802	42·9	10	0·5
22		Palni	13,211	7,549	1	793	378	1,171	1,171	813	578	168	773	1	364	268	69	95·2	90·8	78·8	0·1	18·9	749	56·7	12	0·9
23		Srīrangam	24,799	3,543	1	702	575	1,277	1,277	1,176	714	352	1,134	28	101	83	11	98·8	92·2	49·1	2·4	10·9	1,203	48·5	32	1·3
24		Srīvilliputtūr	29,066	20,761	1	609	516	1,125	1,125	1,144	999	40	1,043	1	45	39	2	91·3	90·7	37·2	0·1	4·4	1,052	36·2	...	...
25		Tanjore	60,341	805	3	2,873	1,556	4,429	1,476	2,518	1,569	580	2,425	1	2,031	1,616	...	96·3	79·6	67·0	...		2,815	46·7	73	1·2
26		Tellicherry	29,258	11,703	2	1,060	729	1,789	894	790	700	36	742	...	1,004	381	16	93·9	38·5	38·4	...	1·6	1,218	41·6	38	1·3
27		Tinnevelly	44,805	7,469	2	1,240	982	2,222	1,111	2,028	1,528	191	1,802	20	366	348	3	89·7	95·9	48·0	0·9	0·8	2,041	45·6	29	0·6
28		Trichinopoly	123,512	14,899	3	2,965	1,921	4,886	1,629	4,080	2,860	1,032	3,958	36	806	624	111	97·9	89·8	37·1	0·9	13·8	5,941	48·1	176	1·4
29		Tiruvalur	21,000	2,100	1	363	328	691	691	635	391	172	578	1	56	55	...	91·2	98·2	30·1	0·2	...	500	23·8	2	0·1
30		Tuticorin	40,185	11,481	1	1,694	1,235	2,929	2,929	1,414	1,209	170	1,380	...	1,515	1,142	141	97·6	83·1	62·8	...	9·3	3,159	78·6	24	0·6
31		Virudupatti	21,355	7,118	1	527	376	903	903	873	505	267	772	11	30	26	...	89·6	86·7	37·4	1·3	...	317	14·8	...	...
		Total of Municipalities.	1,177,055	...	59	44,274	29,274	73,548	1,247	54,183	35,237	12,884	50,173	421	20,922	14,813	1,096	93·3	74·7	55·2	0·8	5·2	59,291	50·4	1,296	1·1
		Grand Total of Southern Range ...	16,270,727	...	295	339,166	299,405	638,571	2,145	598,526	241,107	214,562	489,096	30,545	60,863	40,609	4,126	88·0	71·6	32·6	5·1	6·8	556,890	34·2	8,127	0·5
		Grand Total ...	*41,473,139	311	819·5	863,924	764,707	1,628,631	†1,987	1,481,337	588,937	547,481	1,214,418	80,137	218,589	144,794	21,355	86·7	73·4	32·8	5·4	9·8	1,405,682	33·9	21,911	0·5

* Excludes the population of the Cantonments of Bangalore and Secunderabad.

† In finding out the average number of persons vaccinated, the total work of medical subordinates is excluded.

Note.—(1) Difference between number of operations and number of persons vaccinated, equals 71,295 which represents secondary operations.

(2) This statement does not include the statistics of dispensary vaccination which are exhibited separately in statement No. III.

N.B.—In calculating the percentage of success shown in this statement and statement No. III, unknown cases have not been taken into account.

Summary of Statement No. I.

—	Total number of persons vaccinated. Primary.	Re-vaccination.	Total number of operations performed. Primary.	Re-vaccination.	Percentage of successful cases in which the results were known. Primary.	Re-vaccination.	Average number of persons vaccinated by each vaccinator. Vaccinators employed.	Persons vaccinated by each vaccinator.	Number of children successfully vaccinated. Under one year.	One and under six years.	Ratio of successful vaccination per 1,000 of population.	Total cost of department.	Average cost of each successful case.
By Special staff (statement No. I).	14,20,121	218,510	1,481,337	218,589	86·7	73·4	819·5	1,987	588,937	547,481	32·8	342,799 8 8	0 4 1
By Dispensary staff (statement No. III).	148	33	148	33	98·0	100·0	...	...	106	22	...	...	...
By other agencies, if any.	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	14,20,269	218,543	1,481,485	218,622	86·7	73·4	819·5	1,987	589,043	547,503	32·8	‡342,799 8 8	0 4 1

‡ Exclusive of the pay and allowances of the Inspector of Vaccination and Deputy Sanitary Commissioner, Madras.

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1916–17.

Number.	Districts.	Circles.	Expenditure. Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors. First grade.	Second grade.	Third grade.	Pay.	Vaccinators. First class.	Second class.	Probationers.	Pay.	Peons, etc. Number.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		NORTHERN RANGE.		RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
1	Ganjām.	Berhampur circle ...	...	...	...	...	1	413 1 2	3	5	1	1,484 2 2	1	102 0 0	1,999 3 4
2		Chicacole do. ...	...	...	1	...	...	805 0 0	2	6	1	1,456 14 3	1	102 0 0	2,363 14 3
3		Aska circle ...	...	...	...	...	1	486 12 9	2	4	2	1,288 15 0	1	102 0 0	1,877 11 9
4		Parlākimedi circle ...	...	...	...	1	...	780 0 0	1	6	...	1,288 9 3	1	102 0 0	2,170 9 3
5		Purushottapur circle ...	...	...	...	...	1	480 0 0	3	5	...	1,503 9 4	1	90 0 0	2,073 9 4
...		Ganjām Hill tracts (whole April to August 1916).	...	...	...	...	1	220 0 0	4	7	2	847 4 4	...	45 0 4	1,112 4 8
6		Ganjām Hill tracts, North (September 1916 to March 1917).	...	...	...	...	1	326 9 3	2	5	1	463 2 8	1	53 13 4	843 9 3
7		Ganjām Hill tracts, South (September 1916 to March 1917).	...	...	...	...	1	440 0 0	2	2	3	738 3 7	1	76 0 0	1,254 3 7
		Total of district ...	...	...	1	1	6	3,951 7 2	19	40	10	9,070 12 7	7	672 13 8	13,695 1 5
8	Gōdāvari.	Cocanada circle ...	...	...	...	...	1	480 0 0	3	4	...	1,501 7 2	1	102 0 0	2,083 7 2
9		Rajahmundry do. ...	...	...	...	...	1	480 0 0	4	5	1	1,609 9 0	1	102 0 0	2,191 9 0
10		Polavaram do. ...	...	...	...	...	1	619 0 7	2	3	...	721 5 1	1	111 7 6	1,451 13 2
11		Peddapur do. ...	...	...	...	...	1	480 0 0	3	7	...	1,481 3 7	1	102 0 0	2,063 3 7
12		Bhadrāchalam do. ...	...	...	...	...	1	639 13 0	2	3	1	1,683 7 1	1	114 0 0	2,437 4 1
		Total of district ...	...	...	...	...	5	2,698 13 7	14	22	2	6,996 15 11	5	531 7 6	10,227 5 0
13	Guntūr.	Guntūr circle ...	...	...	1	...	...	840 0 0	3	4	3	1,158 9 2	1	98 8 0	2,097 1 2
14		Narasaraopet circle ...	...	...	...	...	1	533 4 8	2	3	5	1,164 7 3	1	83 0 0	1,780 11 11
15		Bāpatla circle ...	...	...	...	1	...	669 2 9	4	3	4	1,401 12 4	1	91 0 9	2,161 15 10
		Total of district ...	...	...	1	1	1	2,042 7 5	9	10	12	3,724 12 9	3	272 8 9	6,039 12 11
16	Kistna.	Ellore circle ...	...	...	...	1	...	778 10 8	1	3	12	2,100 14 9	1	102 0 0	2,981 9 5
17		Masulipatam circle ...	...	...	1	...	...	830 0 0	2	4	8	2,372 13 5	1	102 0 0	3,304 13 5
18		Narasapur do. ...	...	...	...	...	1	694 0 4	4	2	7	2,003 6 4	1	102 0 0	2,799 6 8
		Total of district ...	...	...	1	1	1	2,302 11 0	7	9	27	6,477 2 6	3	306 0 0	9,085 13 6
19	Nellore.	Kavali circle ...	...	...	...	1	...	720 0 0	1	2	5	1,202 3 6	1	84 0 0	2,006 3 6
20		Gudur do. ...	...	...	1	...	...	777 11 10	4	1	7	1,577 6 0	1	84 0 0	2,439 1 10
21		Kanigiri do. ...	...	...	...	1	...	400 0 0	2	5	3	1,585 1 4	1	84 0 0	2,069 1 4
		Total of district ...	...	...	1	2	...	1,897 11 10	7	8	15	4,364 10 10	3	252 0 0	6,514 6 8
22	Vizagapatam.	Vizagapatam circle ...	...	...	...	...	1	820 4 1	6	6	2	1,813 12 0	1	93 3 2	2,727 3 3
...		Government vaccinators (Gudem Hills) ...	...	...	...	...	...	...	2	...	...	355 0 0	...	...	355 0 0
23		Vizianagram circle ...	...	...	1	...	...	590 0 0	4	9	1	1,869 7 3	1	95 0 0	2,554 7 3
24		Pārvatīpuram do. ...	...	...	...	1	...	531 5 4	3	9	2	1,675 10 6	1	95 0 0	2,301 15 10
...		Government vaccinators, Palkonda Agency ...	...	...	...	...	...	...	...	1	...	131 0 0	...	...	131 0 0
25		Gunupur circle ...	...	...	...	...	1	660 0 0	1	7	1	1,148 5 3	1	108 14 5	1,917 3 8
		Total of district ...	...	...	1	1	2	2,601 9 5	16	32	6	6,993 3 0	4	392 1 7	9,986 14 0
26	Koraput.	Jeypore circle ...	...	...	...	...	1	642 4 6	1	6	4	1,547 5 2	1	87 0 0	2,276 9 8
27		Koraput do. ...	...	...	...	1	...	886 1 0	1	6	1	1,196 2 10	1	100 0 0	2,182 3 10
		Total of district ...	...	...	...	1	1	1,528 5 6	2	12	5	2,743 8 0	2	187 0 0	4,458 13 6
		Total of districts in the Northern range ...	...	...	5	7	16	17,023 1 11	74	133	77	40,371 1 7	27	2,613 15 6	60,008 3 0
1	Municipalities.	Anakāpalle ...	...	...	...	...	...	...	...	1	...	180 0 0	...	...	180 0 0
2		Berhampur ...	...	...	...	...	...	...	1	...	...	250 0 0	...	...	250 0 0
3		Bezwada ...	...	...	...	...	...	...	1	...	...	273 0 0	1	96 0 0	369 0 0
4		Bimlipatam ...	...	...	...	...	...	...	...	1	...	155 12 10	...	...	155 12 10
5		Chicacole ...	...	...	...	...	...	...	1	...	...	206 2 1	...	...	206 2 1
6		Cocanada ...	...	...	...	...	...	...	1	1	...	494 0 10	...	...	494 0 10
7		Ellore ...	...	...	...	...	...	...	1	1	...	421 10 10	...	...	421 10 10
8		Guntūr ...	...	...	...	...	...	...	1	1	...	439 8 3	2	167 4 0	606 12 3
9		Masulipatam ...	...	...	...	...	...	...	1	1	1	438 11 0	...	...	438 11 0
10		Narasaraopet ...	...	...	...	...	...	...	...	...	1	137 12 0	...	...	137 12 0
11		Nellore ...	...	...	...	...	...	...	1	1	...	235 0 0	...	...	235 0 0
12		Ongole ...	...	...	...	...	...	...	1	...	...	180 0 0	...	...	180 0 0
13		Parlākimedi ...	...	...	...	...	...	...	1	...	...	260 0 0	...	...	260 0 0
14		Peddapuram ...	...	...	...	...	...	...	...	...	1	144 0 0	...	...	144 0 0
15		Rajahmundry ...	...	...	...	...	...	...	1	1	...	414 0 0	...	...	414 0 0
16		Tenali ...	...	...	...	...	...	...	...	1	...	180 0 0	...	...	180 0 0
17		Vizagapatam ...	...	...	...	...	...	...	1	1	...	431 0 0	...	...	431 0 0
18		Vizianagram ...	...	...	...	...	...	...	1	1	...	373 7 0	...	...	373 7 0
		Total of Municipalities in the Northern range ...	...	...	...	...	...	...	13	11	3	5,214 0 10	3	263 4 0	5,477 4 10
		Grand Total of Northern range ...	...	...	5	7	16	17,023 1 11	87	144	80	45,585 2 5	30	2,877 3 6	65,485 7 10

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1916–17—cont.

Number.	Districts.	Circles—*cont.*	Expenditure—*cont.* Travelling allowance. (17)	Contingencies.* (18)	Total cost.* (19)	Paid from Imperial funds. (20)	Provincial funds. (21)	Local funds. (22)	Municipal funds. (23)	Total. (24)	Number of all successful primary vaccination and re-vaccination. (25)	Average cost of each successful case. (26)
			RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.
		NORTHERN RANGE—*cont.*										
1	Ganjām.	Berhampur circle	335 4 6	558 11 5	2,893 3 3	...	925 4 3	1,967 15 0	...	2,893 3 3	15,125	0 3 1
2	Ganjām.	Chicacole do.	284 11 9	684 3 6	3,332 13 6	...	1,257 0 4	2,075 13 2	...	3,332 13 6	13,667	0 3 11
3	Ganjām.	Aska do.	367 15 6	589 5 6	2,835 0 9	...	978 8 3	1,856 8 6	...	2,835 0 9	11,002	0 4 1
4	Ganjām.	Parlākimedi do.	305 11 0	585 14 4	3,062 2 7	...	1,239 12 10	1,822 5 9	...	3,062 2 7	9,884	0 4 11
5	Ganjām.	Purushottapur do.	316 14 0	602 11 9	2,993 3 1	...	997 0 0	1,996 3 1	...	2,993 3 1	11,182	0 4 3
...	Ganjām.	Ganjām Hill tracts (whole April to August 1916).	574 2 0	324 13 1	2,011 3 9	...	2,011 3 9	...	...	2,011 3 9	6,698	0 4 10
6	Ganjām.	Ganjām Hill tracts, North (September 1916 to March 1917).	576 3 0	166 5 2	1,586 1 5	...	1,586 1 5	...	...	1,586 1 5	3,813	0 6 8
7	Ganjām.	Ganjām Hill tracts, South (September 1916 to March 1917).	705 3 0	209 9 11	2,169 0 6	...	2,169 0 6	...	...	2,169 0 6	3,777	0 9 2
		Total of district ...	3,466 0 9	3,721 10 8	20,882 12 10	...	11,163 15 4	9,718 13 6	...	20,882 12 10	75,148	0 4 5
8	Gōdāvari.	Cocanada circle	373 8 7	453 0 9	2,910 0 6	...	946 7 9	1,963 8 9	...	2,910 0 6	9,765	0 4 9
9	Gōdāvari.	Rajahmundry do.	926 6 5	887 9 11	4,005 9 4	...	992 11 6	3,012 13 10	...	4,005 9 4	14,541	0 4 5
10	Gōdāvari.	Polavaram do.	736 1 6	220 14 7	2,408 13 3	...	1,145 3 4	1,263 9 11	...	2,408 13 3	3,427	0 11 3
11	Gōdāvari.	Peddāpur do	840 4 9	989 0 1	3,892 8 5	...	1,009 7 6	2,883 0 11	...	3,892 8 5	11,782	0 5 3
12	Gōdāvari.	Bhadrāchalam do.	1,274 7 6	310 3 5	4,021 15 0	...	4,021 15 0	...	...	4,021 15 0	2,238	1 12 9
		Total of district ...	4,150 12 9	2,860 12 9	17,238 14 6	...	8,115 13 1	9,123 1 5	...	17,238 14 6	41,753	0 6 7
13	Guntūr.	Guntūr circle	750 7 3	1,036 15 1	3,884 7 6	...	1,467 11 6	2,416 12 0	...	3,884 7 6	19,341	0 3 3
14	Guntūr.	Narasaraopet circle	603 2 7	581 10 4	2,965 8 10	...	974 14 6	1,990 10 4	...	2,965 8 10	20,461	0 2 4
15	Guntūr.	Bāpatla circle	819 9 0	608 5 6	3,589 14 4	...	1,165 1 0	2,424 13 4	...	3,589 14 4	18,519	0 3 1
		Total of district ...	2,173 2 10	2,226 14 11	10,439 14 8	...	3,607 11 0	6,832 3 8	...	10,439 14 8	58,321	0 2 10

Number.	Districts.	Circles—*cont.*	Travelling allowance. (17)	Contingencies.* (18)	Total cost.* (19)	Imperial funds. (20)	Provincial funds. (21)	Local funds. (22)	Municipal funds. (23)	Total. (24)	Number of all successful primary vaccination and re-vaccination. (25)	Average cost of each successful case. (26)
16	Kistna.	Ellore circle	1,407 4 8	782 7 6	5,171 5 7	...	1,259 4 5	3,912 1 2	...	5,171 5 7	24,703	0 3 4
17	Kistna.	Masulipatam circle	1,312 12 9	825 3 6	5,442 13 8	...	1,549 3 9	3,893 9 11	...	5,442 13 8	21,935	0 4 0
18	Kistna.	Narasapur do.	1,111 9 9	613 10 0	4,524 10 5	...	1,318 12 4	3,205 14 1	...	4,524 10 5	18,577	0 3 11
		Total of district ...	3,831 11 2	2,221 5 0	15,138 13 8	...	4,127 4 6	11,011 9 2	...	15,138 13 8	65,215	0 3 9
19	Nellore.	Kavali circle	658 0 2	499 1 2	3,163 4 10	...	1,375 0 5	1,788 4 5	...	3,163 4 10	8,359	0 6 1
20	Nellore.	Gudur do.	687 10 10	602 9 5	3,729 6 1	...	1,297 13 9	2,431 8 4	...	3,729 6 1	12,786	0 4 8
21	Nellore.	Kanigiri do.	662 0 5	518 6 11	3,249 8 8	...	850 14 3	2,398 10 5	...	3,249 8 8	10,777	0 4 10
		Total of district ...	2,007 11 5	1,620 1 6	10,142 3 7	...	3,523 12 5	6,618 7 2	...	10,142 3 7	31,922	0 5 1
22	Vizagapatam.	Vizagapatam circle	766 5 3	1,423 10 11	4,917 3 5	...	1,323 5 1	3,593 14 4	...	4,917 3 5	28,491	0 3 1
...	Vizagapatam.	Government vaccinators (Gudem Hills).	144 0 0	153 13 0	652 13 0	...	652 13 0	...	...	652 13 0	1,120	0 9 4
23	Vizagapatam.	Vizianagram circle	827 11 2	1,160 6 5	4,542 8 10	...	1,146 5 6	3,396 3 4	...	4,542 8 10	29,812	0 2 5
24	Vizagapatam.	Pārvatīpuram do.	696 14 8	1,133 1 11	4,132 0 5	...	1,017 2 9	3,114 13 8	...	4,132 0 5	25,350	0 2 7
...	Vizagapatam.	Government vaccinators, Palkonda Agency.	91 6 0	27 4 10	249 10 10	...	249 10 10	...	...	249 10 10	373	0 10 9
25	Vizagapatam.	Gunupur circle	1,759 5 0	1,234 1 7	4,910 10 3	...	1,498 0 5	3,412 9 10	...	4,910 10 3	14,654	0 5 4
		Total of district ...	4,285 10 1	5,132 6 8	19,404 14 9	...	5,887 5 7	13,517 9 2	...	19,404 14 9	99,800	0 3 1
26	Koraput.	Jeypore circle	910 2 7	633 2 10	3,819 15 1	...	1,204 10 10	2,615 4 3	...	3,819 15 1	16,373	0 3 8
27	Koraput.	Koraput do.	1,099 6 6	506 2 8	3,787 13 0	...	1,745 3 0	2,042 10 0	...	3,787 13 0	11,074	0 5 6
		Total of district ...	2,009 9 1	1,139 5 6	7,607 12 1	...	2,949 13 10	4,657 14 3	...	7,607 12 1	27,447	0 4 5
		Total of districts in the Northern range.	21,924 10 1	18,922 9 0	1,00,855 6 1	...	39,375 11 9	61,479 10 4	...	1,00,855 6 1	399,606	0 4 0
1	Municipalities.	Anakapalle	...	62 1 0	242 1 0	...	...	...	242 1 0	242 1 0	889	0 4 4
2	Municipalities.	Berhampur	...	47 10 3	297 10 3	...	...	...	297 10 3	297 10 3	1,120	0 4 3
3	Municipalities.	Bezwada	...	30 9 11	399 9 11	...	...	...	399 9 11	399 9 11	1,322	0 4 10
4	Municipalities.	Bimlipatam	...	20 15 9	176 12 7	...	...	...	176 12 7	176 12 7	533	0 5 4
5	Municipalities.	Chicacole	...	94 10 9	300 12 10	...	...	...	300 12 10	300 12 10	714	0 6 9
6	Municipalities.	Cocanada	...	103 8 7	597 9 5	...	...	...	597 9 5	597 9 5	2,232	0 4 3
7	Municipalities.	Ellore	...	129 8 11	551 3 9	...	...	...	551 3 9	551 3 9	2,726	0 3 3
8	Municipalities.	Guntūr	...	161 7 4	768 3 7	...	...	...	768 3 7	768 3 7	2 449	0 5 0
9	Municipalities.	Masulipatam	...	130 14 3	569 9 3	...	...	...	569 9 3	569 9 3	2,350	0 3 11
10	Municipalities.	Narasaraopet	...	21 3 3	158 15 3	...	...	...	158 15 3	158 15 3	538	0 4 9
11	Municipalities.	Nellore	...	35 12 7	270 12 7	...	...	...	270 12 7	270 12 7	1,249	0 3 6
12	Municipalities.	Ongole	...	40 15 11	220 15 11	...	...	...	220 15 11	220 15 11	665	0 5 4
13	Municipalities.	Parlākimedi	...	29 0 9	289 0 9	...	...	...	289 0 9	289 0 9	835	0 5 6
14	Municipalities.	Peddapuram	...	48 15 9	192 15 9	...	...	...	192 15 9	192 15 9	369	0 8 4
15	Municipalities.	Rajahmundry	...	58 10 2	472 10 2	...	...	...	472 10 2	472 10 2	2,150	0 3 6
16	Municipalities.	Tenali	...	53 8 11	233 8 11	...	...	...	233 8 11	233 8 11	747	0 5 0
17	Municipalities.	Vizagapatam	...	123 4 2	554 4 2	...	...	...	554 4 2	554 4 2	1,599	0 5 7
18	Municipalities.	Vizianagram	...	226 9 9	600 0 9	...	...	...	600 0 9	600 0 9	3,325	0 2 11
		Total of Municipalities in the Northern range.	...	1,419 8 0	6,896 12 10	...	...	...	6,896 12 10	6,896 12 10	25,812	0 4 3
		Grand Total of Northern range ...	21,924 10 1	20,342 1 0	1,07,752 2 11	...	39,375 11 9	61,479 10 4	6,896 12 10	1,07,752 2 11	425,418	0 4 1

* Includes cost of lymph supplied by King Institute of Preventive Medicine during 1916–17.

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1916–17—cont.

Number.	Districts.	Circles.	Expenditure. Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors. First grade.	Second grade.	Third grade.	Pay.	Vaccinators. First class.	Second class.	Probationers.	Pay.	Peons, etc. Number.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		CENTRAL RANGE.		RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
1	Anantapur.	Anantapur circle	...	...	...	...	1	480 0 0	2	3	3	1,447 2 3	1	84 0 0	2,011 2 3
2		Penukonda do.	...	...	...	...	1	480 0 0	3	3	5	1,682 15 10	1	84 0 0	2,246 15 10
		Total of district ...	...	...	...	...	2	960 0 0	5	6	8	3,130 2 1	2	168 0 0	4,258 2 1
3	Bellary.	Bellary circle	...	...	..	1	...	720 0 0	5	5	1	1,541 6 7	1	80 4 10	2,341 11 5
4		Hospet do.	...	...	..	...	1	560 8 11	4	7	...	2,203 15 11	1	84 0 0	2,848 8 10
		Total of district ...	...	...	..	1	1	1,280 8 11	9	12	1	3,745 6 6	2	164 4 10	5,190 4 3
5	Chingleput.	Chingleput circle	...	...	..	1	...	720 0 0	...	4	...	1,824 8 4	1	84 0 0	2,628 8 4
6		Saidapet do.	...	...	1	...	..	873 8 3	...	4	...	1,210 7 5	1	96 0 0	2,179 15 8
7		Ponneri do.	...	...	1	...	...	812 0 3	...	4	...	1,388 7 0	1	96 0 0	2,296 7 3
		Total of district ...	...	...	2	1	...	2,405 8 6	...	12	...	4,423 6 9	3	276 0 0	7,104 15 3
8	Chittoor.	Chittoor circle	...	...	...	...	1	660 0 0	6	3	1	1,685 13 5	1	92 7 6	2,438 4 11
9		Karvetnagar circle	...	...	...	...	1	480 0 0	6	7	1	2,054 1 3	1	94 0 0	2,628 1 3
		Total of district ...	...	...	...	...	2	1,140 0 0	12	10	2	3,739 14 8	2	186 7 6	5,066 6 2
10	Cuddapah.	Cuddapah circle	...	...	1	...	...	810 0 0	3	5	...	1,294 10 6	1	91 9 6	2,196 4 0
11		Proddatur do.	...	...	...	...	1	480 0 0	2	5	...	1,065 0 3	1	97 0 0	1,642 0 3
12		Sidhout do	...	...	...	...	1	822 13 6	3	5	...	1,472 0 11	1	98 0 0	2,392 14 5
		Total of district ...	...	...	1	...	2	2,112 13 6	8	15	...	3,831 11 8	3	286 9 6	6,231 2 8
13	Kurnool.	Cumbum circle	...	...	1	...	...	840 0 0	4	4	5	2,003 0 10	1	86 0 0	2,929 0 10
14		Kurnool do.	...	...	...	...	1	480 0 0	4	4	4	1,799 15 9	1	86 0 0	2,365 15 9
		Total of district ...	...	...	1	...	1	1,320 0 0	8	8	9	3,803 0 7	2	172 0 0	5,295 0 7
15	North Arcot.	Vellore circle	...	...	...	1	...	707 1 7	3	...	...	688 0 0	1	96 0 0	1,491 1 7
16		Rānipēttai do.	...	...	1	...	...	915 8 1	2	1	...	590 8 8	1	87 11 9	1,593 12 6
17		Polur do.	...	...	...	...	1	480 0 0	2	1	...	669 5 10	1	96 0 0	1,245 5 10
18		Tiruppattūr do.	...	...	...	1	...	772 4 2	3	6	1	1,503 13 10	1	96 0 0	2,372 2 0
		Total of district ...	...	...	1	2	1	2,874 13 10	10	8	1	3,451 12 4	4	375 11 9	6,702 5 11
19	Salem.	Salem circle	...	...	...	...	1	690 0 0	3	4	...	1,121 7 9	1	83 4 10	1,894 12 7
20		Sankari do.	...	...	...	...	1	480 0 0	1	9	...	996 4 7	1	84 0 0	1,560 4 7
21		Hosūr do.	...	...	...	...	1	480 0 0	2	7	...	1,292 2 6	1	84 0 0	1,856 2 6
		Total of district ...	...	...	...	...	3	1,650 0 0	6	20	...	3,409 14 10	3	251 4 10	5,311 3 8
22	South Arcot.	Cuddalore circle	...	...	...	1	...	753 1 0	...	4	...	1,079 12 3	1	96 8 0	1,929 5 3
23		Vriddhāchalam do.	...	...	...	...	1	926 14 7	3	3	1	1,004 6 10	1	153 15 5	2,085 4 10
24		Tirukkōyilūr do.	...	...	...	1	...	627 1 7	2	3	1	1,031 7 10	1	179 10 10	1,838 4 3
25		Tindivanam do.	...	...	...	...	1	602 0 0	2	2	1	742 3 2	1	96 0 0	1,440 3 2
26		Villupuram do.	...	...	...	...	1	680 0 0	...	4	...	1,029 7 11	1	94 14 4	1,804 6 3
		Total of district ...	...	...	...	2	3	3,589 1 2	7	16	3	4,887 6 0	5	621 0 7	9,097 7 9
		Total of circles in the Central Range ...	...	...	5	6	15	17,332 13 11	65	107	24	34,422 11 5	26	2,501 7 0	54,257 0 4
1	Municipalities.	Adōni	...	...	...	...	...	...	1	1	...	370 0 0	...	...	370 0 0
2		Anantapur	...	...	...	...	...	...	...	...	1	104 10 7	...	...	104 10 7
3		Bellary	...	...	...	...	...	...	2	1	...	666 8 2	...	...	666 8 2
4		Chidambaram	...	...	...	...	...	...	1	1	...	227 11 4	...	...	227 11 4
5		Chingleput	...	...	...	...	...	...	...	1	...	153 3 10	...	...	153 3 10
6		Conjeeveram	...	...	...	...	...	...	...	2	...	300 0 0	...	...	300 0 0
7		Cuddalore	...	...	...	...	...	...	1	1	...	409 0 0	...	...	409 0 0
8		Cuddapah	...	...	...	...	...	...	...	1	...	155 14 0	...	...	155 14 0
9		Gudiyāttam	...	...	...	...	...	...	...	1	...	134 8 6	...	...	134 8 6
10		Hospet	...	...	...	...	...	...	...	1	...	124 11 4	...	...	124 11 4
11		Kurnool	...	...	...	...	...	...	1	...	...	263 0 0	...	...	263 0 0
12		Madras	...	...	...	...	...	...	2	3	5	9,719 1 4	11	1,143 6 9	10,862 8 1
13		Nandyal	...	...	...	...	...	...	1	...	...	180 0 0	...	...	180 0 0
14		Proddatur	...	...	...	...	...	...	...	1	...	180 0 0	...	...	180 0 0
15		Salem	...	...	...	...	...	...	1	1	...	480 0 0	...	...	480 0 0
16		Tiruppattūr	...	...	...	...	...	...	1	...	...	240 0 0	...	...	240 0 0
17		Tirupati	...	...	...	...	...	...	1	...	...	213 2 10	...	...	213 2 10
18		Tiruvannāmalai	...	...	...	...	...	...	1	...	...	203 0 0	...	...	203 0 0
19		Vāniyambādi	...	...	...	...	...	...	...	1	...	180 0 0	...	...	180 0 0
20		Vellore	...	...	...	...	...	...	2	...	...	425 0 6	...	...	425 0 6
21		Wālajāpet	...	...	...	...	...	...	...	1	...	126 13 11	...	...	126 13 11
		Total of Municipalities ...	...	...	...	...	...	...	15	17	6	14,856 6 4	11	1,143 6 9	15,999 13 1

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A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1916–17—cont.

Number.	Districts.	Circles—*cont.*	Expenditure—*cont.* Travelling allowance.	Contingencies.*	Total cost.*	Paid from Imperial funds.	Provincial funds.	Local funds.	Municipal funds.	Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
			17	18	19	20	21	22	23	24	25	26
			RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.
		CENTRAL RANGE—*cont.*										
1	Anantapur.	Anantapur circle ...	568 5 8	862 6 7	3,401 14 6	...	1,097 6 0	2,304 8 6	...	3,401 14 6	11,860	0 4 7
2		Penukonda do. ...	571 12 7	1,135 2 2	3,953 14 7	...	976 15 6	2,976 15 1	...	3,953 14 7	15,508	0 4 1
		Total of district ...	1,140 2 3	1,957 8 9	7,355 13 1	...	2,074 5 6	5,281 7 7	...	7,355 13 1	27,368	0 4 4
3	Bellary.	Bellary circle ...	1,160 8 7	608 0 2	4,110 4 2	...	1,475 13 1	2,634 7 1	...	4,110 4 2	14,073	0 4 8
4		Hospet do. ...	379 4 8	546 15 2	3,774 12 8	...	1,130 5 3	2,644 7 5	...	3,774 12 8	13,889	0 4 4
		Total of district ...	1,539 13 3	1,154 15 4	7,885 0 10	...	2,606 2 4	5,278 14 6	...	7,885 0 10	27,962	0 4 5
5	Chingleput.	Chingleput circle ...	628 3 9	584 13 0	3,841 9 1	...	1,415 3 9	2,426 5 4	...	3,841 9 1	13,987	0 4 5
6		Saidapet do. ...	1,007 2 0	659 15 4	3,847 1 0	...	1,662 13 0	2,184 4 0	...	3,847 1 0	11,779	0 5 3
7		Ponnēri do. ...	1,012 14 10	849 13 11	4,159 4 0	...	1,678 9 4	2,480 10 8	...	4,159 4 0	13,398	0 5 0
		Total of district ...	2,648 4 7	2,094 10 3	11,847 14 1	...	4,756 10 1	7,091 4 0	...	11,847 14 1	39,164	0 4 10
8	Chittoor.	Chittoor circle ...	942 15 9	711 10 4	4,092 15 0	...	1,310 0 4	2,782 14 8	...	4,092 15 0	15,480	0 4 3
9		Karvetnagar circle ...	1,056 0 9	885 2 4	4,569 4 4	...	1,036 9 2	3,532 11 2	...	4,569 4 4	21,838	0 3 4
		Total of district ...	1,999 0 6	1,596 12 8	8,662 3 4	...	2,346 9 6	6,315 9 10	...	8,662 3 4	37,318	0 3 9
10	Cuddapah.	Cuddapah circle ...	649 4 11	453 15 1	3,299 8 0	...	1,278 11 9	2,020 12 3	...	3,299 8 0	6,805	0 7 9
11		Proddatur do. ...	561 10 11	332 0 5	2,535 11 7	...	935 13 0	1,599 14 7	...	2,535 11 7	6,530	0 6 3
12		Sidhout do. ...	658 13 1	414 2 9	3,465 14 3	...	1,331 8 4	2,134 5 11	...	3,465 14 3	9,075	0 6 1
		Total of district ...	1,869 12 11	1,200 2 3	9,301 1 10	...	3,546 1 1	5,755 0 9	...	9,301 1 10	22,410	0 6 8

Number.	Districts.	Circles—*cont.*	Travelling allowance.	Contingencies.*	Total cost.*	Imperial funds.	Provincial funds.	Local funds.	Municipal funds.	Total.	Number of all successful primary vaccination and re-vaccination.	Average cost of each successful case.
13	Kurnool.	Cumbum circle ...	694 3 0	706 5 10	4,329 9 8	...	1,860 8 6	2,469 1 2	...	4,329 9 8	15,358	0 4 6
14		Kurnool do. ...	277 5 0	749 6 5	3,392 11 2	...	1,082 9 8	2,310 1 6	...	3,392 11 2	16,963	0 3 2
		Total of district ...	971 8 0	1,455 12 3	7,722 4 10	...	2,943 2 2	4,779 2 8	...	7,722 4 10	32,321	0 3 10
15	North Arcot.	Vellore circle ...	1,157 7 1	458 3 10	3,106 12 6	...	1,703 9 4	1,403 3 2	...	3,106 12 6	11,673	0 3 10
16		Rānipēttai do. ...	754 3 10	432 13 9	2,780 14 1	...	1,544 4 3	1,236 9 10	...	2,780 14 1	10,446	0 4 3
17		Polur do. ...	825 15 6	512 9 10	2,583 15 2	...	1,268 2 1	1,315 13 1	...	2,583 15 2	10,682	0 3 10
18		Tiruppattūr do. ...	1,095 8 5	636 13 1	4,104 7 6	...	1,527 9 7	2,576 13 11	...	4,104 7 6	15,954	0 4 1
		Total of district ...	3,833 2 10	2,040 8 6	12,576 1 3	...	6,048 9 3	6,532 8 0	...	12,576 1 3	48,755	0 4 2
19	Salem.	Salem circle ...	308 2 0	728 1 10	2,931 0 5	...	1,012 4 7	1,918 11 10	...	2,931 0 5	16,242	0 2 11
20		Sankari do. ...	414 14 2	727 3 5	2,702 6 2	...	824 2 1	1,878 4 1	...	2,702 6 2	17,159	0 2 6
21		Hosūr do. ...	423 11 6	632 1 2	2,911 15 2	...	822 2 10	2,089 12 4	...	2,911 15 2	16,168	0 2 11
		Total of district ...	1,146 11 8	2,087 6 5	8,545 5 9	...	2,658 9 6	5,886 12 3	...	8,545 5 9	49,569	0 2 8
22	South Arcot.	Cuddalore circle ...	1,083 2 0	642 12 4	3,655 3 7	...	1,628 13 3	2,026 6 4	...	3,655 3 7	13,219	0 4 5
23		Vriddhāchalam do. ...	686 1 8	746 9 2	3,517 15 8	...	1,609 8 5	1,908 7 3	...	3,517 15 8	13,409	0 4 2
24		Tirukkōyilūr do. ...	584 12 8	551 3 7	2,974 4 6	...	1,213 6 11	1,760 13 7	...	2,974 4 6	12,246	0 3 11
25		Tindivanam do. ...	490 4 9	471 4 3	2,401 12 2	...	1,068 12 3	1,332 15 11	...	2,401 12 2	10,793	0 3 7
26		Villupuram do. ...	680 10 9	541 7 3	3,026 8 3	...	1,079 7 11	1,947 0 4	...	3,026 8 3	10,719	0 4 6
		Total of district ...	3,524 15 10	2,953 4 7	15,575 12 2	...	6,600 0 9	8,975 11 5	...	15,575 12 2	60,386	0 4 1
		Total of circles in the Central Range ...	18,673 7 10	16,541 1 0	89,471 9 2	...	33,575 2 2	55,896 7 0	...	89,471 9 2	346,253	0 4 2
1	Municipalities.	Adōni ...	...	88 8 0	457 8 0	...	...	...	457 8 0	457 8 0	1,284	0 5 8
2		Anantapur ...	...	8 3 1	112 13 8	...	...	...	112 13 8	112 13 8	321	0 5 8
3		Bellary ...	...	154 15 1	821 7 3	...	...	...	821 7 3	821 7 3	3,146	0 4 2
4		Chidambaram ...	...	55 13 3	283 8 7	...	...	...	283 8 7	283 8 7	1,490	0 3 1
5		Chingleput ...	...	82 2 3	235 6 1	...	...	...	235 6 1	235 6 1	726	0 5 2
6		Conjeeveram ...	...	84 9 1	384 9 1	...	...	...	384 9 1	384 9 1	1,827	0 3 4
7		Cuddalore ...	...	150 9 5	559 9 5	...	...	...	559 9 5	559 9 5	2,588	0 3 6
8		Cuddapah ...	...	42 7 8	198 5 8	...	...	...	198 5 8	198 5 8	568	0 5 7
9		Gudiyāttam ...	...	18 4 6	152 13 0	...	...	...	152 13 0	152 13 0	516	0 4 9
10		Hospet ...	...	41 14 1	166 9 5	...	...	...	166 9 5	166 9 5	878	0 3 0
11		Kurnool ...	...	31 3 5	294 3 5	...	...	...	294 3 5	294 3 5	1,228	0 3 10
12		Madras ...	17 5 6	4,579 4 8	15,459 2 3	...	...	...	15,459 2 3	15,459 2 3	26,931	0 9 2
13		Nandyal ...	...	41 1 0	221 1 0	...	...	...	221 1 0	221 1 0	885	0 4 0
14		Proddatur ...	...	45 15 6	225 15 6	...	...	...	225 15 6	225 15 6	575	0 6 3
15		Salem ...	...	154 11 2	634 11 2	...	...	...	634 11 2	634 11 2	2,717	0 3 9
16		Tirupattūr ...	...	42 6 1	282 6 1	...	...	...	282 6 1	282 6 1	801	0 5 8
17		Tirupati ...	...	10 15 7	224 2 5	...	...	...	224 2 5	224 2 5	370	0 9 8
18		Tiruvannāmalai ...	...	39 10 2	242 10 2	...	...	...	242 10 2	242 10 2	897	0 4 4
19		Vāniyambādi ...	...	25 0 7	205 0 7	...	...	...	205 0 7	205 0 7	739	0 4 5
20		Vellore ...	...	110 0 7	535 1 1	...	...	...	535 1 1	535 1 1	2,169	0 3 11
21		Wālājāpet ...	...	29 4 10	156 2 9	...	...	...	156 2 9	156 2 9	372	0 6 9
		Total of Municipalities ...	17 5 6	5,837 0 0	21,854 2 7	...	...	...	21,854 2 7	21,854 2 7	51,028	0 6 10

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency during the official year 1916–17—cont.

Number.	Districts.	Circles.	Expenditure. Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors. First grade.	Second grade.	Third grade.	Pay.	Vaccinators. First class.	Second class.	Probationers.	Pay.	Peons, etc. Number.	Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		CENTRAL RANGE—*cont.*		RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
...		Bangalore Cantonment	...	...	...	...	...	...	1	1	...	336 0 0	...	...	336 0 0
...		Secunderabad do.	...	...	1	...	...	968 2 0	1	3	...	933 15 2	4	356 14 9	2,258 15 11
		Total of Cantonments	...	...	1	...	...	968 2 0	2	4	...	1,269 15 2	4	356 14 9	2,594 15 11
		Grand Total of Central Range	...	...	6	6	15	18,300 15 11	82	128	30	50,549 0 11	41	4,001 12 6	72,851 13 4
		SOUTHERN RANGE.													
1	Coimbatore.	North Coimbatore circle	...	...	...	1	...	720 0 0	3	5	2	1,492 13 0	1	95 7 9	2,308 4 9
2		East do.	...	...	1	...	...	840 0 0	1	7	1	1,423 11 2	1	96 0 0	2,359 11 2
3		South do.	...	...	...	...	1	480 0 0	2	3	2	1,011 4 2	1	88 3 11	1,579 8 1
4		Central do.	...	...	1	...	...	840 0 0	2	6	1	1,316 1 11	1	96 0 0	2,252 1 11
		Total of district	...	...	2	1	1	2,880 0 0	8	21	6	5,243 14 3	4	375 11 8	8,499 9 11
5	Madura.	Dindigul circle	...	...	...	...	1	877 13 4	...	4	...	1,223 3 6	1	94 8 0	2,195 8 10
6		Madura do.	...	...	...	1	...	720 0 0	...	4	...	1,256 8 11	1	93 8 0	2,070 0 11
7		Usilampatti do.	...	...	...	...	1	718 1 0	...	3	1	1,193 15 3	1	93 8 0	2,005 8 3
		Total of district	...	...	...	1	2	2,315 14 4	...	11	1	3,673 11 8	3	281 8 0	6,271 2 0
8	Malabar.	Tellicherry circle	...	...	1	...	...	879 14 2	2	8	...	1,524 10 4	1	102 0 0	2,506 8 6
9		Calicut do.	...	...	...	...	1	480 0 0	3	6	1	1,212 14 8	1	102 0 0	1,794 14 8
10		Palghat do.	...	...	...	...	1	480 0 0	3	9	...	2,209 11 11	1	102 0 0	2,791 11 11
11		Malapuram do.	...	...	...	...	1	480 0 0	3	8	...	1,915 13 8	1	100 3 11	2,496 1 7
		Total of district	...	...	1	...	3	2,319 14 2	11	31	1	6,863 2 7	4	406 3 11	9,589 4 8
12	The Nilgiris.	Nilgiris circle	...	...	...	...	1	548 0 6	3	...	...	608 8 3	1	260 9 6	1,417 2 3
		Total of district	...	...	...	...	1	548 0 6	3	...	...	608 8 3	1	260 9 6	1,417 2 3
13	Ramnad.	Srīvilliputtūr circle	...	...	...	1	...	720 0 0	3	5	1	1,450 10 4	1	96 0 0	2,266 10 4
14		Ramnad do.	...	...	...	1	...	710 0 0	3	6	1	2,085 13 11	1	96 0 0	2,891 13 11
15		Tiruppattūr circle	...	...	...	1	...	720 0 0	3	8	1	1,749 12 11	1	93 15 0	2,563 11 11
		Total of district	...	...	...	3	...	2,150 0 0	9	19	3	5,286 5 2	3	285 15 0	7,722 4 2
16	South Kanara.	Northern circle	...	...	...	1	...	720 0 0	2	3	3	1,856 13 5	1	102 0 0	2,678 13 5
17		Central do.	...	...	1	...	...	840 0 0	2	1	5	1,928 13 5	1	102 0 0	2,870 13 5
18		Southern do.	...	...	...	...	1	480 0 0	1	5	4	2,209 12 5	1	102 0 0	2,791 12 5
		Total of district	...	...	1	1	1	2,040 0 0	5	9	12	5,995 7 3	3	306 0 0	8,341 7 3
19	Tanjore.	Tanjore circle	...	...	...	1	...	720 0 0	2	3	1	816 5 4	1	98 7 8	1,634 13 0
20		Negapatam do.	...	...	1	...	...	840 0 0	3	6	1	1,707 10 6	1	102 0 0	2,649 10 6
21		Pattukkōttai do.	...	...	...	1	...	518 11 4	2	10	1	1,584 10 10	1	102 0 0	2,205 6 2
22		Kumbakōnam do.	...	...	...	...	1	651 13 9	2	10	1	1,350 14 5	1	102 0 0	2,104 12 2
		Total of district	...	...	1	2	1	2,730 9 1	9	29	4	5,451 9 1	4	404 7 8	8,594 9 10
23	Tinnevelly.	Sērmadēvi circle	...	...	...	1	...	782 8 6	4	3	1	1,242 4 1	1	97 8 0	2,122 4 7
24		Srīvaikuntam do.	...	...	1	...	...	840 0 0	3	5	1	1,186 0 0	1	97 8 0	2,123 8 0
25		Koilpatti do.	...	...	...	1	...	720 0 0	1	4	4	881 2 4	1	94 13 4	1,695 15 8
		Total of district	...	...	1	2	...	2,342 8 6	8	12	6	3,309 6 5	3	289 13 4	5,941 12 3
26	Trichinopoly.	Trichinopoly circle	...	...	1	...	...	903 1 11	4	8	2	2,277 5 4	1	96 0 0	3,276 7 3
27		Ariyalūr do.	...	...	1	...	...	616 9 1	4	4	2	1,437 0 2	1	94 7 3	2,148 0 6
28		Nāmakkal do.	...	...	...	...	1	513 7 9	3	6	1	1,731 9 3	1	96 0 0	2,341 1 0
		Total of district	...	...	2	...	1	2,033 2 9	11	18	5	5,445 14 9	3	286 7 3	7,765 8 9
		Total of circles in the Southern Range	...	...	8	10	10	19,360 1 4	64	150	38	41,885 15 5	28	2,896 12 4	64,142 13 1
1	Municipalities.	Bodinayakanur	...	...	...	...	...	...	1	...	...	64 13 5	...	...	64 13 5
2		Calicut	...	...	...	...	...	...	1	1	1	574 7 1	...	...	574 7 1
3		Cannanore	...	...	...	...	...	...	1	...	...	270 2 3	...	...	270 2 3
4		Cochin	...	...	...	...	...	...	1	...	...	228 0 0	...	...	228 0 0
5		Coimbatore	...	...	...	...	...	...	1	1	...	621 14 4	...	...	621 14 4
6		Coonoor	...	...	...	...	...	...	1	...	...	260 7 6	...	...	260 7 6
7		Dindigul	...	...	...	...	...	...	1	...	...	180 0 0	...	...	180 0 0
8		Dharapuram	...	...	...	...	...	...	...	...	1	154 5 2	...	...	154 5 2
9		Erode	...	...	...	...	...	...	1	...	...	308 9 7	...	...	308 9 7
10		Karūr	...	...	...	...	...	...	1	...	...	309 7 0	...	...	309 7 0
11		Kodaikānal	...	...	...	...	...	...	...	1	...	125 0 0	...	...	125 0 0
12		Kumbakōnam	...	...	...	...	...	...	1	2	...	549 1 6	...	...	549 1 6
13		Madura	...	...	...	...	...	...	6	5	...	1,002 15 4	...	...	1,002 15 4

A—VACCINE DEPARTMENT—*cont.*

Statemen No. II showing the Cost of the Department in the Madras Presidency for the official year 1916–17—cont.

Number.	Districts.	Circles—*cont.*	Expenditure—*cont.* Travelling allowance. (17)	Contingencies. (18)	Total cost. (19)	Paid from Imperial funds. (20)	Provincial funds. (21)	Local funds. (22)	Municipal funds. (23)	Total. (24)	Number of all successful primary vaccination and re-vaccination. (25)	Average cost of each successful case. (26)
			RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.
		CENTRAL RANGE—*cont.*										
1	...	Bangalore Cantonment	240 0 0	...	576 0 0	576 0 0	...	...	...	576 0 0	370	1 8 11
2	...	Secunderabad do.	180 0 0	393 15 1	2,832 15 0	...	...	2,832 15 0	...	2,832 15 0	4,247	0 10 8
		Total of Cantonments ...	420 0 0	393 15 1	3,408 15 0	576 0 0	...	*2,832 15 0	...	3,408 15 0	4,617	0 11 10
		Grand Total of Central Range ...	19,110 13 4	22,772 0 1	1,14,734 10 9	576 0 0	33,575 2 2	58,729 6 0	21,854 2 7	1,14,734 10 9	400,898	0 4 7
		SOUTHERN RANGE—*cont.*										
1	Coimbatore.	North Coimbatore circle	532 11 7	816 6 3	3,657 6 7	...	1,362 10 0	2,294 12 7	...	3,657 6 7	11,874	0 5 2
2		East do. do.	409 8 1	883 1 5	3,652 4 8	...	1,532 10 0	2,119 10 8	...	3,652 4 8	14,175	0 4 1
3		South do. do.	384 14 11	497 2 1	2,461 9 1	...	1,027 1 11	1,434 7 2	...	2,461 9 1	8,930	0 4 5
4		Central do. do.	434 5 3	847 8 7	3,533 15 9	...	1,584 15 9	1,949 0 0	...	3,533 15 9	12,980	0 4 4
		Total of district ...	1,761 7 10	3,044 2 4	13,305 4 1	...	5,507 5 8	7,797 14 5	...	13,305 4 1	47,459	0 4 6
5	Madura.	Dindigul circle	792 11 10	740 11 10	3,729 0 6	...	1,525 3 4	2,203 13 2	...	3,729 0 6	11,356	0 5 3
6		Madura do.	743 15 0	610 1 1	3,424 1 0	...	1,119 12 9	2,304 4 3	...	3,424 1 0	10,939	0 5 0
7		Usilampatti do.	773 2 2	689 15 10	3,468 10 3	...	1,268 10 8	2,199 15 7	...	3,468 10 3	11,736	0 4 9
		Total of district ...	2,309 13 0	2,040 12 9	10,621 11 9	...	3,913 10 9	6,708 1 0	...	10,621 11 9	34,031	0 5 0
8	Malabar.	Tellicherry circle	1,099 15 9	1,225 3 2	4,831 11 5	...	1,946 4 9	2,885 6 8	...	4,831 11 5	23,268	0 3 4
9		Calicut do.	1,050 11 3	991 12 7	3,837 6 6	...	1,429 6 3	2,408 0 3	...	3,837 6 6	21,208	0 2 11
10		Palghat do.	1,311 3 1	1,446 9 8	5,549 8 8	...	1,370 6 6	4,179 2 2	...	5,549 8 8	29,391	0 3 0
11		Malapuram do.	1,219 14 3	1,958 1 7	5,674 1 5	...	1,351 15 2	4,322 2 3	...	5,674 1 5	28,028	0 3 3
		Total of district ...	4,681 12 4	5,621 11 0	19,892 12 0	...	6,098 0 8	13,794 11 4	...	19,892 12 0	101,895	0 3 1
12	The Nilgiris.	Nilgiris Circle	1,131 8 9	660 7 11	3,209 2 11	...	2,085 11 6	1,123 7 5	...	3,209 2 11	4,610	0 11 2
		Total of district ...	1,131 8 9	660 7 11	3,209 2 11	...	2,085 11 6	1,123 7 5	...	3,209 2 11	4,610	0 11 2
13	Ramnad.	Srīvilliputtūr circle	768 0 8	582 2 10	3,616 13 10	...	1,233 8 6	2,383 5 4	...	3,616 13 10	16,617	0 3 6
14		Ramnad (old Paramagudi) circle ...	305 2 9	596 11 2	3,793 11 10	...	1,287 10 9	2,506 1 1	...	3,793 11 10	17,468	0 3 6
15		Tiruppattūr circle	937 9 9	917 5 5	4,418 11 1	...	1,352 3 9	3,066 7 4	...	4,418 11 1	18,384	0 3 11
		Total of district ...	2,010 13 2	2,096 3 5	11,829 4 9	...	3,873 7 0	7,955 13 9	...	11,829 4 9	52,469	0 3 7
16	South Kanara.	Northern circle	998 2 5	431 10 9	4,108 10 7	...	1,397 14 8	2,710 11 11	...	4,108 10 7	14,546	0 4 8
17		Central do.	860 14 3	367 9 9	4,099 5 5	...	1,385 2 5	2,714 3 0	...	4,099 5 5	12,085	0 5 5
18		Southern do.	1,074 9 7	483 7 7	4,349 13 7	...	1,115 9 0	3,234 4 7	...	4,349 13 7	14,803	0 4 8
		Total of district ...	2,933 10 3	1,282 12 1	12,557 13 7	...	3,898 10 1	8,659 3 6	...	12,557 13 7	41,434	0 4 10
19	Tanjore.	Tanjore circle	305 4 9	648 8 11	2,588 10 8	...	1,224 10 11	1,363 15 9	...	2,588 10 8	10,781	0 3 10
20		Negapatam do.	528 10 11	671 9 2	3,849 14 7	...	1,333 4 0	2,516 10 7	...	3,849 14 7	16,542	0 3 9
21		Pattukkōttai do.	306 8 6	933 2 3	3,445 0 11	...	1,103 9 4	2,341 7 7	...	3,445 0 11	19,528	0 2 10
22		Kumbakōnam do.	285 4 0	708 10 3	3,098 10 5	...	1,102 4 9	1,996 5 8	...	3,098 10 5	17,776	0 2 9
		Total of district ...	1,425 12 2	2,961 14 7	12,982 4 7	...	4,763 13 0	8,218 7 7	...	12,982 4 7	64,627	0 3 3
23	Tinnevelly.	Sērmadēvi circle	293 7 4	674 10 4	3,090 6 3	...	1,247 14 9	1,842 7 6	...	3,090 6 3	19,126	0 2 7
24		Srīvaikuntam do.	642 3 10	804 5 7	3,570 1 5	...	1,307 11 3	2,262 6 2	...	3,570 1 5	23,678	0 2 5
25		Koilpatti do.	595 15 6	595 10 2	2,887 9 4	...	1,207 15 10	1,679 9 6	...	2,887 9 4	19,022	0 2 5
		Total of district ...	1,531 10 8	2,074 10 1	9,548 1 0	...	3,763 9 10	5,784 7 2	...	9,548 1 0	61,826	0 2 6
26	Trichinopoly.	Trichinopoly circle	821 5 3	1,063 13 9	5,161 10 3	...	1,495 0 2	3,666 10 1	...	5,161 10 3	21,764	0 3 10
27		Ariyalūr do.	585 6 5	791 3 9	3,524 10 8	...	1,156 3 4	2,368 7 4	...	3,524 10 8	13,962	0 4 0
28		Nāmakkal do.	623 8 0	954 13 8	3,919 6 8	...	1,064 5 9	2,855 0 11	...	3,919 6 8	16,849	0 3 9
		Total of district ...	2,030 3 8	2,809 15 2	12,605 11 7	...	3,715 9 3	8,890 2 4	...	12,605 11 7	52,575	0 3 10
		Total of circles in the Southern Range ..	19,816 11 10	22,592 9 4	1,06,552 2 3	...	37,619 13 9	68,932 4 6	...	1,06,552 2 3	460,926	0 3 8
1	Municipalities	Bodinayakanur	...	27 8 9	92 6 2	...	...	...	92 6 2	92 6 2	509	0 2 11
2		Calicut	...	286 8 1	860 15 2	...	...	...	860 15 2	860 15 2	6,408	0 2 2
3		Cannanore	0 15 0	65 0 6	336 1 9	...	...	...	336 1 9	336 1 9	2,496	0 2 2
4		Cochin	...	32 12 3	260 12 3	...	...	...	260 12 3	260 12 3	1,324	0 3 0
5		Coimbatore	...	154 4 10	776 3 2	...	...	...	776 3 2	776 3 2	1,705	0 7 3
6		Coonoor	...	14 8 9	275 0 3	...	...	...	275 0 3	275 0 3	561	0 7 10
7		Dindigul	...	76 14 9	255 14 9	...	...	...	255 14 9	255 14 9	1,015	0 4 0
8		Dharapuram	...	32 13 1	187 2 3	...	...	...	187 2 3	187 2 3	306	0 9 9
9		Erode	...	47 2 9	355 12 4	...	...	...	355 12 4	355 12 4	449	0 12 8
10		Karūr	...	13 2 8	322 9 8	...	...	...	322 9 8	322 9 8	511	0 10 1
11		Kodaikānal	...	5 4 3	130 4 3	...	...	...	130 4 3	130 4 3	159	0 13 1
12		Kumbakōnam	...	200 13 3	749 14 9	...	...	...	749 14 9	749 14 9	2,099	0 5 9
13		Madura	...	940 3 10	1,943 3 2	...	...	...	1,943 3 2	1,943 3 2	14,124	0 2 2

* Paid from Local, Abkāri, etc., funds.

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1916–17—cont.

Number.	Districts.	Circles.	Inspector of Vaccination and Deputy Sanitary Commissioner.	Pay.	Deputy Inspectors. First grade.	Deputy Inspectors. Second grade.	Deputy Inspectors. Third grade.	Deputy Inspectors. Pay.	Vaccinators. First class.	Vaccinators. Second class.	Vaccinators. Probationers.	Vaccinators. Pay.	Peons. Number.	Peons. Pay.	Total pay of establishment.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
		SOUTHERN RANGE—*cont.*		RS. A. P.				RS. A. P.				RS. A. P.		RS. A. P.	RS. A. P.
14	Municipalities.	Mannārgudi	...	...	...	...	...	...	1	...	...	180 0 0		...	180 0 0
15		Mangalore	...	...	...	...	...	...	1	1	...	540 0 0	1	96 0 0	636 0 0
16		Māyavaram	...	...	...	...	...	...	1	...	...	211 0 0	..	...	211 0 0
17		Negapatam	...	...	...	...	...	...	1	2	...	526 1 7	...	...	526 1 7
18		Ootacamund	...	...	...	...	...	...	1	1	...	218 2 9	...	...	218 2 9
19		Palamcottah	...	...	...	...	...	...	1	1	...	424 13 4	1	82 0 0	506 13 4
20		Palghat	...	...	...	...	...	...	1	1	...	397 2 4	...	...	397 2 4
21		Periyakulam	...	...	...	...	...	...	1	...	...	184 9 6	...	...	184 9 6
22		Palni	...	...	...	...	...	...	1	...	...	225 0 0	...	...	225 0 0
23		Srīrangam	...	...	...	...	...	...	1	...	...	240 0 0	...	...	240 0 0
24		Srīvilliputtūr	...	...	...	...	...	...	1	...	...	119 10 9	...	...	119 10 9
25		Tanjore	...	...	...	...	...	...	1	2	...	359 9 5	...	...	359 9 5
26		Tellicherry	...	...	...	...	...	...	...	1	1	303 0 0	1	72 0 0	375 0 0
27		Tinnevelly	...	...	...	...	...	...	1	1	..	333 8 0	1	84 0 0	417 8 0
28		Trichinopoly	...	...	...	...	...	...	1	1	1	451 12 0	...	...	451 12 0
29		Tiruvālūr	...	...	...	...	...	...	1	...	...	180 0 0	...	...	180 0 0
30		Tuticorin	...	...	...	...	...	...	1	...	1	250 7 3	...	...	250 7 3
31		Virudupatti	...	...	...	...	...	...	...	1	...	184 3 1	...	...	184 3 1
		Total of municipalities ...	...		...	...	...	...	32	22	5	9,978 3 2	4	334 0 0	10,312 3 2
		Grand Total of Southern Range ...			8	10	10	19,360 1 4	96	172	43	51,864 2 7	32	3,230 12 4	74,455 0 3
		Madras Presidency ...	1	7,924 2 0	...	...	...	...	...	...	...	...	...	...	7,924 2 0
		Grand Total ...	1	7,924 2 0	19	23	41	54,684 3 2	265	444	153	1,47,998 5 11	103	10,109 12 4	2,20,716 7 5

A—VACCINE DEPARTMENT—*cont.*

Statement No. II showing the Cost of the Department in the Madras Presidency for the official year 1916—17—cont.

Number.	Districts.	Circles—*cont.*	Expenditure—*cont.* Travelling allowance. (17)	Contingencies.* (18)	Total cost.* (19)	Paid from Imperial funds. (20)	Provincial funds. (21)	Local funds. (22)	Municipal funds. (23)	Total. (24)	Number of all successful primary vaccination and re-vaccination. (25)	Average cost of each successful case. (26)
		SOUTHERN RANGE—*cont.*	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.	RS. A. P.		RS. A. P.
14	Municipalities—*cont.*	Mannārgudi	...	52 1 7	232 1 7	...	...	...	232 1 7	232 1 7	773	0 4 10
15		Mangalore ...	...	49 8 5	685 8 5	...	...	...	685 8 5	685 8 5	2,655	0 4 2
16		Māyavaram	...	30 5 3	241 5 3	...	...	...	241 5 3	241 5 3	995	0 3 11
17		Negapatam	...	182 8 0	708 9 7	...	...	...	708 9 7	708 9 7	3,769	0 3 0
18		Ootacamund	...	87 9 6	305 12 3	...	...	...	305 12 3	305 12 3	1,313	0 3 9
19		Palamcottah	...	66 15 5	573 12 9	...	...	...	573 12 9	573 12 9	2,035	0 4 6
20		Palghat ...	...	109 4 0	506 6 4	...	...	...	506 6 4	506 6 4	1,796	0 4 6
21		Periyakulam	...	24 6 6	209 0 0	...	...	...	209 0 0	209 0 0	795	0 4 2
22		Palni ...	...	20 10 9	245 10 9	...	...	...	245 10 9	245 10 9	1,041	0 3 9
23		Srīrangam ...	...	109 1 7	349 1 7	...	...	...	349 1 7	349 1 7	1,217	0 4 7
24		Srīvilliputtūr	...	49 14 10	169 9 7	...	...	...	169 9 7	169 9 7	1,082	0 2 6
25		Tanjore ...	...	189 13 3	549 6 8	...	...	...	549 6 8	549 6 8	4,041	0 2 2
26		Tellicherry	...	32 9 1	407 9 1	...	...	...	407 9 1	407 9 1	1,123	0 5 10
27		Tinnevelly	...	115 11 7	533 3 7	...	...	...	533 3 7	533 3 7	2,150	0 4 0
28		Trichinopoly	...	281 4 6	733 0 6	...	...	...	733 0 6	733 0 6	4,582	0 2 7
29		Tiruvālūr ...	...	42 7 6	222 7 6	...	...	...	222 7 6	222 7 6	633	0 5 7
30		Tuticorin ...	...	58 1 8	308 8 11	...	...	...	308 8 11	308 8 11	2,522	0 2 0
31		Virudupatti	...	48 15 5	233 2 6	...	...	...	233 2 6	233 2 6	798	0 4 8
		Total of municipalities ...	0 15 0	3,447 6 7	13,760 8 9	...	...	...	13,760 8 9	13,760 8 9	64,986	0 3 5
		Grand Total of Southern Range ...	19,817 10 10	26,039 15 11	1,20,312 11 0	...	37,619 13 9	68,932 4 6	13,760 8 9	1,20,312 11 0	525,912	0 3 8
		Madras Presidency ...	2,623 10 0	...	10,547 12 0	...	10,547 12 0	...	..	10,547 12 0	...	...
		Grand Total ...	63,476 12 3	69,154 1 0	†3,53,347 4 8	576 0 0	1,21,118 7 8	1,89,141 4 10	42,511 8 2	3,53,347 4 8	1,352,228	0 4 2

* Includes cost of lymph supplied by the King Institute of Preventive Medicine during 1916–17.

† Includes the pay and allowances of the Deputy Sanitary Commissioner, Madras.

N.B.—The average cost of each successful case was calculated on the total number of successful vaccinations performed by the special staff only, viz., Local Fund, Government, Municipal and Cantonment staffs (vide G.O. No. 1158 L., Mis., dated 4th September 1911).

B—DISPENSARY VACCINATION.

Statement No. III showing Dispensary Vaccination in Madras Presidency for the official year 1916–17.

Districts.	Number of dispensaries in each district to which a vaccinator is attached.	Average number of vaccinators attached to dispensaries during the year.	Total number of persons vaccinated.	Average number of persons vaccinated by each vaccinator.	Primary vaccination. Total number of operations.	Primary vaccination. Successful. Under one year.	Primary vaccination. Successful. Over one and under six years.	Primary vaccination. Successful. Total of all ages.	Primary vaccination. Unknown.	Re-vaccination. Total number of operations.	Re-vaccination. Successful.	Re-vaccination. Unknown.	Percentage of successful cases in which the results were known. Primary vaccination.	Percentage of successful cases in which the results were known. Re-vaccination.	Percentage of unknown cases to total operations. Primary vaccination.	Percentage of unknown cases to total operations. Re-vaccination.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Anantapur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Bellary	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chingleput	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Chittoor	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Coimbatore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cuddapah	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ganjām	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Gōdāvari (L.F. hospital, Amalapur).	...	...	19	...	...	...	...	...	...	19	16	3	...	100·0	...	15·8
Guntūr	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kistna	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Kurnool	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madras	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Madura (Municipal hospital, Kodaikānal).	...	...	162	...	148	106	22	145	...	14	14	...	98·0	100·0	...	...
Malabar	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nellore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Nilgiris	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Ramnad	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Salem	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Arcot	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
South Kanara	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tanjore	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Tinnevelly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trichinopoly	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Vizagapatam	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Korapput	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Total ...	...	...	181	...	148	106	22	145	...	33	30	3	98·0	100·0	...	9·1

Statement No. IV showing the number of persons primarily vaccinated and the number of those persons who were successfully vaccinated in the Madras Presidency in each of the undermentioned years.

	Persons primarily vaccinated.																			
	1907–1908.		1908–1909.		1909–1910.		1910–1911.		1911–1912.		1912–1913.		1913–1914.		1914–1915.		1915–1916.		1916–1917.	
	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	Total number.	Number successfully vaccinated.	* Total number.	Number successfully vaccinated.	* Total number.	Number successfully vaccinated.	* Total number.	Number successfully vaccinated.
Government vaccinators ...	12,948	11,557	12,478	11,319	12,448	11,758	11,214	10,270	11,897	10,545	15,646	13,254	17,492	17,015	19,843	17,892	16,052	14,283	17,276	13,900
Local Fund do. ...	1,309,814	1,176,323	1,373,883	1,265,809	1,319,314	1,163,628	1,240,602	1,027,398	1,328,350	1,133,157	1,277,687	1,118,543	1,335,023	1,223,086	1,333,727	1,186,576	1,332,471	1,155,851	1,275,205	1,090,029
Cantonment do. ...	4,687	4,542	5,164	5,072	4,134	4,023	4,187	3,963	3,606	3,421	4,821	4,681	5,021	4,916	4,282	3,949	4,354	4,152	3,218	2,950
Zamindari do. ...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Municipal do. ...	108,261	102,615	110,669	106,433	111,045	105,198	111,754	102,748	111,070	103,028	103,170	99,018	110,076	106,611	113,408	108,742	112,146	106,830	114,172	107,326
Dispensaries do. ...	93	78	129	120	18	18	5	5	65	60	17	11	6	6	1	...	99	9	148	145
Medical Subordinates ...	2,121	1,558	1,045	758	369	214	411	229	497	322	206	118	139	114	131	117	1,681	1,464	250	213
Total ..	1,437,924	1,296,673	1,503,368	1,389,511	1,447,328	1,284,839	1,368,173	1,144,613	1,455,485	1,250,527	1,401,547	1,235,625	1,467,757	1,351,748	1,471,392	1,317,277	1,466,803	1,282,676	1,410,269	1,214,563

* As per G.O. No. 1158 L., Mis., dated 4th September 1911.

Statement No. V showing Particulars of Vaccination verified by Inspecting Officers during 1916–17.

Districts.	Total number of persons vaccinated.		Total number inspected.						Percentage of inspection to total number vaccinated.						Percentage of cases found successful to total number inspected.						Percentage of success as reported by Vaccinators.	
			By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.		By Sanitary Assistants to District Medical and Sanitary Officers.		By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.		By Sanitary Assistants to District Medical and Sanitary Officers.		By District Medical and Sanitary Officers and Civil Surgeons.		By Deputy Inspectors of Vaccination.		By Sanitary Assistants to District Medical and Sanitary Officers.			
	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.	Primary vaccination.	Re-vaccination.
NORTHERN RANGE.																						
Ganjām	68,531	24,227	1,273	972	51,986	15,663	...	...	1·9	4·0	75·9	64·7	...	...	91·4	91·0	85·4	72·8	...	...	89·7	84·1
Gōdāvari	59,781	13,070	737	13	39,866	6,229	811	41	1·2	0·1	66·7	47·7	1·4	0·3	72·9	69·2	66·4	52·5	86·8	95·1	67·4	58·9
Guntūr	59,859	9,737	708	85	46,254	3,805	1,899	136	1·2	0·9	77·3	39·1	3·2	1·4	98·0	96·4	81·7	62·3	82·4	58·8	90·0	85·8
Kistna	71,757	5,202	2,393	715	61,815	2,628	529	...	3·3	13·7	86·1	50·5	0·7	...	96·2	75·8	80·4	56·2	100·0	...	91·1	80·7
Nellore	37,123	6,361	563	182	20,264	2,258	...	...	1·5	2·9	54·6	35·5	...	...	98·8	61·0	68·2	42·2	...	...	75·6	68·4
Vizagapatam	85,399	38,515	62	2	47,536	19,150	...	...	0·1	·005	55·7	49·7	...	...	90·3	100·0	75·8	54·4	...	...	90·7	82·6
Koraput	27,817	5,449	1,581	128	18,392	2,819	...	...	5·7	2·3	66·1	51·7	...	...	92·0	83·6	84·8	45·8	...	...	89·7	60·6
CENTRAL RANGE.																						
Anantapur	29,191	1,219	845	51	18,429	890	...	...	2·9	4·2	63·1	73·0	...	...	89·9	78·4	75·2	30·1	...	...	90·5	68·4
Bellary	32,555	2,751	178	...	16,908	15	...	...	0·5	...	51·9	0·5	...	...	100·0	...	82·5	80·0	...	...	95·2	58·4
Chingleput	53,410	5,408	784	29	45,746	3,387	...	...	1·5	0·5	85·7	62·6	...	...	26·4	82·8	79·7	64·3	...	...	80·3	66·2
Chittoor	38,314	3,205	588	...	21,718	1,723	...	...	1·5	...	56·7	53·8	...	...	100·0	...	85·6	53·2	...	...	92·0	70·1
Cuddapah	27,211	1,068	567	125	20,336	703	...	...	2·1	11·7	74·7	65·8	...	...	88·2	28·0	67·7	47·8	...	...	79·6	66·5
Kurnool	29,301	4,344	860	132	21,665	2,554	...	...	2·9	3·0	73·9	58·8	...	...	97·9	93·9	77·5	47·5	...	...	96·8	93·7
Madras	20,516	17,906	...	...	*	*	...	...	...	...	*	*	...	...	...	...	*	*	...	...	96·8	56·1
North Arcot	60,739	3,583	1,059	...	48,263	2,283	817	...	1·7	...	79·5	63·7	1·3	...	99·4	...	85·7	54·7	86·3	...	88·2	37·9
Salem	53,779	2,202	1,766	306	35,284	782	...	...	3·3	13·9	65·6	35·5	...	...	97·3	81·0	83·0	50·0	...	...	91·8	81·6
South Arcot	73,912	9,164	3,499	935	52,487	4,828	...	...	4·7	10·2	71·0	52·7	...	...	96·2	88·0	77·0	74·3	...	...	83·6	78·7
SOUTHERN RANGE.																						
Coimbatore	71,324	7,874	6	908	44,792	1,912	...	...	0·01	11·5	62·8	24·3	...	...	100·0	59·4	69·5	35·5	...	...	69·1	53·2
Madura	63,461	8,957	120	30	44,738	1,823	...	...	0·2	0·3	70·5	20·4	...	...	83·3	83·3	82·1	43·0	...	...	83·8	67·3
Malabar	129,386	18,129	1,975	2,295	96,108	5,544	...	...	1·5	12·7	74·3	30·6	...	...	95·7	70·0	80·5	46·2	...	...	82·4	63·7
Nilgiris, The	5,558	1,343	623	700	3,350	806	...	...	11·2	52·1	60·3	22·8	...	...	96·0	76·6	97·4	94·1	...	.	96·6	82·4
Rāmnād	55,991	1,003	299	72	34,943	95	...	...	0·5	7·2	62·4	9·5	...	...	92·0	86·1	93·1	50·5	...	...	96·6	90·4
South Kanara	45,999	3,756	2,534	278	30,561	2,537	...	...	5·5	7·4	66·4	67·5	...	...	97·9	92·4	88·4	68·9		...	89·3	78·7
Tanjore	71,556	9,762	2,138	2,166	39,906	2,685	1,362	50	3·0	22·2	55·8	27·5	1·9	0·5	95·1	75·6	91·7	75·9	97·5	40·0	94·8	86·8
Tinnevelly	69,169	7,770	1,025	644	47,778	1,848	...	...	1·5	8·3	69·0	23·8	...	...	91·5	76·6	81·4	42·3	...	...	87·6	83·4
Trichinopoly	65,412	2,283	2,530	978	43,694	424	...	...	3·9	42·8	66·8	18·6	...	...	93·2	72·6	85·4	65·8	...	...	90·1	81·3
Total ...	†1,407,051	†214,288	28,713	11,746	952,819	86,891	5,418	227	2·0	5·5	67·7	40·5	0·4	0·1	92·8	75·7	80·7	58·2	89·1	61·2	86·7	74·1

* Information cannot be furnished as the post of Deputy Inspector of Vaccination has been abolished.

† Excludes cases performed in cantonments.

Statement No. VI showing the Number of Vaccinations performed in Municipal Towns on children under one year of age (G.O. Mis. No. 1534 L., dated 6th December 1909).

Municipalities.	Number of births available for vaccination during the year 1916–17.	Number of deaths amongst children under one year during the year.	Number of successful vaccinations on children under one year during the year ending March 1917.	Date of extension of compulsory vaccination to municipalities.
1	2	3	4	5
Ādōni	2,110	269	673	1st Dec. 1886
Anantapur	334	63	123	1st Jan. 1886.
Anakāpalle	630	66	365	1st Nov. 1891.
Bellary	1,694	503	807	1st Jan. 1891.
Berhampur	784	177	404	15th April 1891.
Bezwada	1,117	313	573	1st May 1892.
Bimlipatam	298	56	180	1st Jan. 1894.
Calicut	2,889	398	1,672	1st Oct. 1891.
Cannanore	1,069	211	569	1st June 1891.
Chicacole	578	99	349	1st Dec. 1890.
Chidambaram	703	192	375	1st July 1887.
Chingleput	534	140	246	1st April 1897.
Cochin	652	146	649	1st Jan. 1894.
Cocanada	1,521	263	702	1st June 1890.
Coimbatore	2,142	468	690	1st Jan. 1889.
Conjeeveram	2,266	566	1,201	1st Jan. 1891.
Coonoor	357	30	135	1st April 1887.
Cuddalore	2,200	651	1,278	1st Aug. 1896
Cuddapah	662	103	318	15th July 1888.
*Dharapuram	399	27	*	1st Feb. 1916.
Dindigul	1,431	383	796	16th July 1886.
Ellore	1,980	617	1,137	1st June 1888.
Erode	651	125	120	1st April 1891.
Gudiyāttam	460	69	266	1st June 1889
Guntūr	1,829	510	868	1st Jan. 1914.
Hospet	651	95	415	1st April 1892.
Karūr	590	105	318	1st Sep. 1900.
Kodaikānal	144	25	94	1st April 1889.
Kumbakōnam	1,954	417	947	1st Aug. 1889.
Kurnool	1,139	217	705	1st July 1891.
Madura	6,092	1,249	4,356	1st Jan 1890.
Mannārgudi	725	134	356	1st Dec. 1890.
Mangalore	1,586	205	1,267	1st Sep. 1891.
Masulipatam	1,463	366	780	1st May 1888.
Māyavaram	959	224	486	1st Oct. 1886.
Nandyal	510	86	344	1st Jan. 1900
Narasaraopet	362	31	133	1st April 1916.
Negapatam	1,693	316	2,025	1st July 1886.
Nellore	1,109	205	380	1st Aug. 1886.
Ongole	511	95	285	1st Dec. 1885.
Ootacamund	768	117	444	1st July 1887.
Palamcottah	1,493	366	741	1st May 1886.
Palghat	1,854	399	1,135	1st Jan. 1883.
Parlākimedi	621	137	372	1st Dec. 1890.
Peddapuram	397	48	207	1st April 1916.
Periyakulam	920	198	626	1st Feb. 1891.
Palni	612	135	339	1st Dec. 1891.
Prodattur	547	85	259	1st Sep. 1915.
Rajahmundry	1,634	373	748	1st Jan. 1886.
Salem	2,755	497	1,895	1st May 1891.
Srīrangam	687	199	309	1st July 1888.
Srīvilliputtūr	1,350	231	922	1st Jan. 1896.
Tanjore	2,294	506	1,297	1st July 1893.
Tenali	637	206	300	1st April 1910.
Tellicherry	1,056	201	661	15th Jan. 1892.
Tinnevelly	1,954	565	1,024	1st July 1886.
Trichinopoly	3,745	868	1,874	1st Aug. 1890.
Tiruppattūr	653	154	414	1st July 1891.
Tirupati	438	80	260	1st Mar. 1890.
Tiruvalur	662	149	284	1st Oct. 1913.
Tiruvannāmalai	999	120	678	15th Dec. 1897.
Tuticorin	1,486	366	965	1st May 1892.
Vāniyambādi	822	127	538	1st May 1889.
Vellore	2,156	335	1,052	1st Jan. 1897.
Virudupatti	944	221	505	1st Sep. 1915.
Vizagapatam	1,495	279	553	1st Aug. 1890.
Vizianagram	1,375	296	652	1st Jan. 1891.
Walajapet	404	71	203	20th June 1892.
Total	83,536	17,544	46,744	

* As the town was evacuated on account of plague it is reported that children were not available for vaccination.

Statement No. VII showing Inspection work done by the Deputy Inspectors of Vaccination during the year 1916–17.

District.	Circle.	Number of inspecting officers. First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	Number of villages visited. First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	Total number of cases vaccinated.	Number of days spent on Inspection duty.	Number of cases verified. First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	Total number of cases inspected by Deputy Inspectors of all sorts.	Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated. First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	Northern Range.																	
Ganjām	Berhampur	...	...	1	...	...	420	17,596	197	...	...	14,326	14,326	12,096	84·4	...	...	81·4
	Chicacole	1	...	...	710	...	...	15,940	215	11,057	...	...	11,057	9,302	84·1	69·4	...	...
	Aska	...	...	1	...	..	636	13,508	223	...	...	11,143	11,143	8,821	79·2	...	...	82·5
	Parlākimedi	...	1	...	...	518	...	12,078	179	...	9,157	...	9,157	7,224	78·9	...	75·8	...
	Purushottapur	...	...	1	...	...	611	13,242	300	...	...	12,836	12,836	11,074	86·3	...	...	96·9
	Ganjām H.T. (Old) April to August 1916.	...	...	(1)	...	...	154	8,883	81	...	...	1,941	1,941	1,402	72·2	...	...	21·9
	Ganjām H.T. (North) Sep. 1916 to March 1917.	...	...	1	...	...	257	4,607	123	...	...	3,455	3,455	2,991	86·6	...	...	75·0
	Ganjām H.T. (South) Sep. 1916 to March 1917.	...	...	1	...	...	283	4,344	122	...	...	3,734	3,734	2,898	77·6	...	...	85·9
Gōdāvari	Cocanada	...	...	1	..	...	359	15,194	225	...	...	10,073	10,073	7,725	76·7	...	...	66·3
	Rajahmundry	...	...	1	...	...	243	24,905	236	...	...	15,862	15,862	10,016	63·1	...	...	63·7
	Polavaram	...	...	1	...	...	340	5,787	171	..	...	3,616	3,616	2,314	64·0	...	...	62·5
	Peddāpuram	...	...	1	...	...	274	21,102	214	...	...	12,537	12,537	7,573	60·4	...	...	59·4
	Bhadrachalam	...	...	1	...	...	337	4,327	228	...	...	4,007	4,007	2,102	52·5	...	...	92·6
Guntūr	Guntūr	1	...	...	213	...	...	21,782	259	15,067	...	...	15,067	13,105	87·0	69·2	...	...
	Narasaraopet	...	...	1	...	...	263	23,298	228	...	...	18,410	18,410	13,296	72·2	...	...	79·0
	Bāpatla	...	1	...	...	220	...	21,419	232	...	16,582	...	16,582	13,748	82·9	...	77·4	...
Kistna	Ellore	...	1	...	...	313	...	27,748	265	...	21,255	...	21,255	18,713	88·0	...	76·6	...
	Masulipatam	1	...	...	333	...	...	24,433	270	21,717	...	...	21,717	16,522	76·1	88·9	...	...
	Narasapur	...	...	1	...	...	197	21,533	239	...	...	21,471	21,471	15,914	74·1	...	...	99·7
Nellore	Kavali	...	1	...	...	306	...	13,027	182	...	8,568	...	8,568	5,441	63·5	...	65·8	...
	Gudur	1	...	...	298	...	...	16,418	195	6,602	...	...	6,602	4,187	63·4	40·2	...	...
	Kanigiri	...	1	...	...	116	..	16,406	110	...	7,352	...	7,352	5,145	69·9	...	44·8	...
Vizagapatam.	Vizagapatam	...	...	1	...	...	408	34,083	216	...	...	21,362	21,362	16,101	75·4	...	...	62·7
	Vizianagram	1	...	...	198	...	...	37,416	132	19,517	...	...	19,517	11,631	59·6	52·2	...	...
	Pārvatīpuram	...	1	...	...	405	...	30,843	216	...	16,060	...	16,060	10,532	65·6	...	52·1	...
	Gunupur	...	...	1	...	...	349	16,874	211	...	...	9,747	9,747	8,174	83.9	...	...	57·8

Koraput* ...	Jeypore	...	...	1	...	...	714	21,566	246	...	...	12,910	12,910	9,515	73·7	...	...	59·9
	Koraput	...	1	...	...	970	...	12,868	274	...	8,301	...	8,301	7,371	88·8	...	64·5	...
	Total ...	5	7	15	1,752	2,848	5,845	501,227	5,789	73,960	87,275	177,430	338,665	254,938	75·3	63·8	64·9	70·7
Central Range.																		
Anantapur.	Anantapur	...	...	1	...	...	552	13,690	284	...	...	9,972	9,972	7,634	76·6	...	...	72·8
	Penukonda	...	...	1	...	...	369	17,153	242	...	...	9,347	9,347	6,500	69·5	...	...	54·5
Bellary ...	Bellary	...	1	...	...	183	...	15,329	194	...	7,624	...	7,624	5,600	73·5	...	49·8	..
	Hospet	...	...	1	...	...	320	14,215	236	...	...	9,299	9,299	8,361	89·9	...	...	65·4
Chingleput ..	Chingleput	...	1	...	...	763	...	19,144	241	...	16,688	...	16,688	13,504	80·9	...	87·2	...
	Saidapet	1	...	...	630	...	...	18,557	221	15,357	...	...	15,357	12,121	78·9	82·8	...	...
	Ponnēri	1	...	...	730	...	...	19,550	188	17,088	...	...	17,088	13,001	76·1	87·4	...	...
Chittoor ...	Chittoor	...	...	1	...	...	1,112	18,766	194	...	...	10,827	10,827	8,553	78·9	...	...	57·7
	Karvetnagar	...	...	1	...	...	824	24,206	207	...	...	12,614	12,614	10,956	86·9	...	...	52·1
Cuddapah ...	Cuddapah	1	...	...	242	...	...	9,966	212	7,446	...	...	7,446	4,515	60·6	74·7	...	...
	Siddhavattam	...	...	1	...	...	246	11,516	221	...	...	7,395	7,395	5,495	74·4	...	...	64·7
	Prodattur...	...	...	1	...	...	302	7,991	245	...	...	6,198	6,198	4,086	65·9	...	...	77·6
Kurnool ..	Cumbum	1	...	...	444	...	...	16,216	242	11,123	...	...	11,123	7,595	68·3	68·6	...	...
	Kurnool	...	...	1	...	...	444	17,531	228	...	...	13,096	13,096	10,419	79·6	...	...	74·7
Madras ...	Madras *	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
North Arcot.	Vellore	...	1	...	...	397	...	14,935	212	...	13,455	...	13,455	11,670	86·7	...	90·1	...
	Rānipēttai	1	...	...	370	...	...	14,709	185	12,391	...	...	12,391	9,984	80·6	84·2	...	...
	Polūr	...	...	1	...	...	431	14,636	207	...	...	12,655	12,655	10,674	84·3	...	...	86·5
	Tiruppattūr	...	1	...	...	406	...	18,399	220	...	12,045	...	12,045	10,274	85·3	...	65·5	...
Salem ...	Salem	...	...	1	...	...	447	18,488	214	...	...	11,971	11,971	10,265	85·7	...	...	64·8
	Sankēri	...	...	1	...	...	135	19,625	168	...	...	13,326	13,326	10,605	78·8	...	...	67·9
	Hosūr	...	...	1	...	...	427	17,548	297	...	...	10,769	10,769	8,913	82·8	...	...	61·4
South Arcot.	Cuddalore	...	1	...	...	488	...	18,416	246	...	15,251	...	15,251	13,044	85·5	...	82·8	...
	Vriddhāchalam	...	...	1	...	...	398	19,135	208	...	...	11,764	11,764	7,850	66·7	...	...	61·5
	Tirukkōyilūr	...	1	...	...	192	...	15,799	216	...	8,667	...	8,667	6,144	70·9	...	54·9	...
	Tindivanam	...	...	1	...	...	284	14,575	186	...	...	8,056	8,056	6,228	77·3	...	...	55·3
	Villupuram	...	...	1	...	...	751	16,776	222	...	...	13,577	13,577	10,719	78·9	...	...	80·9
	Total ...	5	6	15	2,416	2,429	7,042	426,871	5,736	63,405	73,730	160,866	298,001	234,610	78·7	80·3	72·3	65·4
Southern Range.																		
Coimbatore.	North Coimbatore ...	...	1	...	...	362	...	20,381	272	...	10,377	...	10,377	6,620	68·8	...	50·9	...
	South do. ...	...	...	1	...	...	148	12,103	218	...	...	10,040	10,040	8,161	81·3	...	...	82·9
	East do. ...	1	...	...	952	...	...	23,855	242	14,338	...	...	14,338	8,764	61·1	60·1	...	...
	Central do. ...	1	...	...	308	...	...	19,951	251	11,949	...	...	11,949	8,247	69·0	59·8	...	...

* Information could not be furnished as the post of Deputy Inspector of Vaccination has been abolished.

Statement No. VII showing Inspection work done by the Deputy Inspectors of Vaccination during the year 1916–17—cont.

District.	Circle.	Number of inspecting officers. First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	Number of villages visited. First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	Total number of cases vaccinated.	Number of days spent on Inspection duty.	Number of cases verified. First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.	Total number of cases inspected by Deputy Inspectors of all sorts.	Total number of successful cases as reported by Deputy Inspectors.	Percentage of successful cases to the total number inspected as reported by Deputy Inspectors.	Proportion per cent of inspection to total number vaccinated. First-grade Deputy Inspectors.	Second-grade Deputy Inspectors.	Third-grade Deputy Inspectors.
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	Southern Range—cont.																	
Madura ...	Madura ...	...	1	...	...	1,150	...	17,610	279	...	16,014	...	16,014	12,367	77·2	...	90·9	...
	Dindigul ...	...	...	1	...	...	454	17,500	214	...	...	16,736	16,736	13,367	79·9	...	...	95·6
	Usilampatti	...	...	1	...	...	265	18,546	203	...	...	13,811	13,811	11,794	85·4	...	...	74·5
Malabar ...	Malappuram	...	...	1	...	...	175	34,989	241	...	...	28,446	28,446	23,902	84·0	...	...	81·3
	Tellicherry	1	...	...	336	...	...	27,824	263	20,923	...	...	20,923	17,530	83·8	55·7	...	...
	Calicut ...	...	...	1	...	...	160	28,764	217	...	...	17,354	17,354	12,532	72·2	...	...	60·3
	Palghat ...	...	...	1	...	...	304	42,123	217	...	...	34,929	34,929	26,006	74·5	...	...	82·9
Nilgiris ...	The Nilgiris	...	...	1	...	...	901	4,751	260	...	...	3,656	3,656	3,550	97·1	...	...	76·9
Rāmnād ...	Srīvilliputtūr	...	1	...	...	293	...	18,302	258	...	12,229	...	12,229	11,270	91·2	...	66·8	...
	Tiruppattūr	...	1	...	...	559	...	18,901	204	...	12,040	...	12,040	11,138	92·5	...	63·7	...
	Rāmnād ...	...	1	...	...	284	...	18,169	182	...	10,769	...	10,769	10,168	94·4	...	59·3	...
South Kanara.	Northern S. Kanara	...	1	...	...	142	...	16,944	237	...	9,306	...	9,306	8,211	88·2	...	54·9	...
	Central do.	1	...	...	150	...	...	14,184	258	11,164	...	...	11,164	9,785	87·6	78·7	...	...
	Southern do.	...	...	1	...	...	206	17,552	319	...	...	12,628	12,628	10,776	85·3	...	...	71·9
Tanjore ...	Tanjore ...	...	1	...	...	310	...	11,308	225	...	8,857	...	8,857	8,009	90·4	...	78·3	...
	Negapatam	1	...	...	228	...	...	17,314	224	11,462	...	...	11,462	10,442	91·1	66·2	...	...
	Pattukkōttai	...	1	...	...	349	...	20,772	266	...	11,674	...	11,674	11,297	96·7	...	56·2	...
	Kumbakōnam	...	...	1	...	...	364	19,905	254	...	...	10,598	10,598	8,900	83·9	...	...	53·2
Tinnevelly ...	Srīvaikuntam	1	...	...	1,048	...	...	29,066	261	19,508	...	...	19,508	14,837	76·1	67·1	...	...
	Shermadevi	...	1	...	...	203	...	23,238	245	...	16,526	...	16,526	13,778	83·4	...	71·1	...
	Koilpatti ..	...	1	...	...	285	...	22,625	254	...	13,592	...	13,592	11,071	81·5	...	60·1	...
Trichinopoly.	Trichinopoly	1	...	...	1,123	...	...	24,278	236	17,771	...	...	17,771	15,839	89·1	73·2	...	...
	Nāmakkal	...	...	1	...	...	650	20,561	217	...	...	13,468	13,468	11,130	81·9	...	...	65·5
	Ariyalūr ...	1	...	..	248	...	...	16,944	181	12,879	...	...	12,879	10,641	82·6	75·8	...	...
	Total ...	8	10	10	4,393	3,937	8,627	578,460	6,698	119,994	121,384	161,666	403,044	330,132	81·9	69·5	64·5	74·6
	Total for the Presidency.	18	23	40	8,561	9,214	16,514	1,506,558	18,223	257,359	282,389	499,962	1,039,710	819,680	78·8	* 69·9	* 66·5	* 70·1

* Includes Inspection of previous year's vaccinations also.

Government of Madras

LOCAL AND MUNICIPAL DEPARTMENT

G.O. No. 1374 L., 21st September 1917

Vaccination

Report on the working of the — department in the Madras Presidency during the year 1916–17, reviewed.

READ—the following paper :—

Letter—from Major W. A. JUSTICE, M.B.C.M., D.P.H., I.M.S., Sanitary Commissioner for Madras.
To—the Secretary to Government, Local and Municipal Department.
Dated—the 31st July 1917.
No.—548-V.

ABSTRACT.—Submitting report on the working of the Vaccination department in the Madras Presidency for 1916–17.

Order—No. 1374 L., dated 21st September 1917.

The report on vaccination which was due with the Government on the 1st July was received on the 1st August. The Deputy Sanitary Commissioner complains that the returns from the Municipal Chairman, Chingleput, the Deputy Inspector of Vaccination, Dindigul Range, and the District Medical and Sanitary Officers of South Arcot and Chingleput were received on dates ranging up to the 14th June, instead of by the 1st May. The Government trust that such delays will not recur.

2. The total number of vaccine operations performed during the year fell from 1,801,170 to 1,699,926, or by 5·6 per cent. Large increases in vaccinations occurred in the districts of Chingleput, South Arcot and Koraput, while in Malabar, Gōdāvari, Vizagapatam, Madura, Kistna and Nellore there were marked decreases, not following in all cases variations in the prevalence of small-pox. The fall in Malabar is attributed to the paucity of cases, which is presumably a reference to the large number of vaccinations performed in 1915; but that number was not so large as to make the explanation altogether acceptable. In Madura it is said that difficulties were experienced in recruiting vaccinators for temporary vacancies and the fall in the other districts is described as a reaction from the large number of operations performed in the previous year owing to the impetus given by the prevalence of small-pox. All district boards should consider the desirability of further extending the compulsory provisions of the Madras Local Boards Act, 1884, relating to vaccination.

3. The municipalities as a whole showed a decrease of 24,579 cases, or 12·3 per cent, as compared with the previous year. Madura and Cannanore showed marked increases, while large decreases in Madras, Parlakimedi, Tuticorin and Trichinopoly are attributed to the absence or diminished prevalence of small-pox in those towns.

4. Re-vaccinations alone showed a decrease of 50,396, or 18·7 per cent, distributed, with local variations, over local fund areas, municipalities and cantonments. In the city of Madras alone the figures were lower by 25,762, and the decline was marked in the districts of Gōdāvari and Vizagapatam and the municipalities of Parlakimedi and Tuticorin.

5. In the report for 1915–16 mention was made of the experiment of storing vaccine pulp in the raw condition and mixing it with lanoline when required for use, as a contributory cause of the poor results of that year. This system was discontinued during the year and yet the reported percentage of success fell from 87·7 to 86·7 in the case of primary and secondary vaccination and from 75·7 to 73·4 in the case of re-vaccination. The results were again specially bad in the districts of Gōdāvari and Coimbatore and in the municipality of Cocanada. The Sanitary Commissioner has issued revised instructions defining clearly the period within which vaccine despatched from the Institute should be used and the special attention of district boards is drawn to these instructions. The total number of successful operations per mille of the population was returned at 32·8 for the Presidency as a whole, against 35·4 in the previous year.

6. The average cost of each successful operation in the case of local fund vaccinations was As. 3–10, against As. 3–8 in the previous year, in spite of a slight decrease in the cost of establishment. In the case of municipal vaccinations also the cost rose, from As. 4–4 to As. 4–10. The cost was in excess of As. 5 in the districts of Gōdāvari, Nellore, Cuddapah and the Nilgiris, and in excess of As. 8 in the municipalities of Kodaikanal, Karur, Erode, Dharapuram, Tirupati, Madras and Peddapuram. In Kodaikanal the conditions are exceptional but in the other towns it should be possible to secure a reduction in the cost without impairing efficiency.

7. The number of children under one year of age successfully vaccinated fell from 608,342 to 588,937. The districts in which large decreases occurred were Nellore, South Arcot, Cuddapah, Coimbatore, Vizagapatam and Malabar. Decreases also occurred in the municipalities of Erode, Trichinopoly, Gudiyattam and Negapatam. In Adoni, Coimbatore and Erode the number of children protected against small-pox constitutes a very small proportion of the number which, according to the birth registers, should have been available for vaccination. The municipal councils concerned should insist on greater attention to the vaccination of children.

8. The deputy inspectors of vaccination verified 67·7 per cent of the total number of primary and secondary vaccinations in all areas except cantonments and 40·5 per cent of the number of cases revaccinated. The District Medical and Sanitary Officers verified a small percentage of primary and secondary operations. In Vizagapatam, Bellary, Coimbatore, Madura and Rāmnād the total number of cases verified by them was less than one per cent of the total number of operations. The verification work done by the sanitary assistants to the District Medical and Sanitary Officers continued to be inadequate; it was less than two per cent in Gōdāvari, North Arcot and Tanjore, and less than one per cent in Kistna. The Government trust that all district boards will insist upon the sanitary assistants exercising close supervision over the work of vaccinators.

9. The general results of the year were unsatisfactory both in regard to the number of operations performed and in regard to the degree of success obtained. Inspecting officers lay the blame for this state of affairs mainly on the ignorance and unreliability of many of the men employed as vaccinators, and the Government have for some time recognized the necessity of attracting a better class of men. While the inspecting staff is paid by Government, the vaccinators are employed by local boards and municipal councils; the resources of most of these local bodies are limited and the pay given by many of them to their vaccinators is so small that it attracts only men who can get no employment in any other capacity. The Government have sanctioned an improvement in the pay and prospects of the deputy inspectors of vaccination from April next and have urged on local bodies the necessity for a similar improvement of the pay and prospects of vaccinators, accompanied by an insistence on higher qualifications and character in the persons selected. More than one district board has already propounded a scheme of reorganization and all are, it is believed, aware of the deficiencies in the present arrangements for protection against small-pox and willing to effect the necessary reorganization.

(True Extract)

R. A. Graham,
Acting Secretary to Government.

Editors' Table.

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